

# ENHANCING QUALITY OF WORK AND PRODUCTIVITY



Practical Guide for Small to Medium Enterprises Wood Furniture Industry

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# ENHANCING QUALITY OF WORK AND PRODUCTIVITY

Practical Guide  
Small to Medium Enterprises  
Wood Furniture Industry



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### **ADDRESS BY THE CHAIRMAN, FPESD CENTRAL JAVA**

The furniture industry is a business still being depended upon by Central Java province, along with its textile products. However, lately the furniture industry has experienced some deterioration as a result of several factors, among them the difficulty in obtaining quality raw materials, especially teakwood, and the increasingly stiff competition from international markets.

Linked to the problems experienced by Small to Medium Enterprises in Central Java within the furniture industry, The Forum for Economic and Natural Resource Development (FPESD), Central Java chapter, through dialogues among the Government and Private stakeholders, is developing various programmes in support of the efforts for the recovery of the furniture industry. In the future, the direction and development of the furniture sector will be focused on the production of furniture better oriented towards the interests of the broader society through the participation of Private and Community Stakeholders in conjunction with the Government, to draw up furniture sector developmental policies more attuned to the environmental sustainability aspect.

The Forum for Economic and Natural Resource Development (FPESD), Central Java chapter, expresses the hope that this volume can provide benefits to the furniture industry participants, the decision makers, and the teakwood user community in the endeavour to overcome the crisis in teakwood as a raw material. The cooperation among various parties, namely the Government, Private Sector, and the Community itself in the framework of disseminating information through this book is extremely significant, and hopefully this volume may truly be beneficial to all the competent parties involved.

### **THE FORUM FOR ECONOMIC & NATURAL RESOURCE DEVELOPMENT, CENTRAL JAVA CHAIRMAN**

A handwritten signature in black ink, appearing to read 'MIYASTO', written over a horizontal line.

**PROF.DR. MIYASTO**



International Labour Organization

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## **F O R E W O R D**

The International Labour Office (ILO) has produced this book to serve as a practical tool that will help small to medium enterprises working in the Indonesian Wood Furniture industry to cope with the difficulties they face in terms of obtaining good quality raw materials. The majority of small and medium scale businesses are unable to obtain sufficient information on procedures of using wood raw materials correctly and wisely. Given the high cost and increased scarcity of precious woods such as teak and mahogany, it is important that firms use these materials efficiently, in order to maintain competitiveness. This book gives these enterprises practical information to enhance the quality of work and their productivity.

This book, for small and medium scale entrepreneurs, provides useful advice on how to utilize raw wood materials correctly and wisely and how to develop positive work and business attitudes. Through this book, it is hoped that the reader will acquire ideas to improve each phase of the furniture production process and consequently the quality of their products.

**Alan Boulton**

A handwritten signature in black ink, appearing to read 'Alan Boulton', is positioned below the name.

**Director  
ILO Jakarta**

## OUR FURNITURE INDUSTRY

The Indonesian furniture industry has sufficiently great potential in overall economic activities. The industry in Central Java provided a contribution of some 27% of total exports in 2000. No less than 8000 work units are spread over 32 production centers, among others at: Sukoharjo, Blora, Klaten, Boyolali, and Jepara— employing 400,000 workers.

During the last three years, the furniture industry has felt the effects of a decrease in orders—especially from foreign buyers—needed to sustain their business. The first problem encountered is the difficulty in obtaining quality raw materials, especially teakwood, followed by stiff competition among products in the increasingly tight international markets. Despite the fact that Indonesia has design potential, cultural wealth, and quality wood (teak), our furniture products are losing out in the competition with Chinese- and Vietnamese-made furniture, specifically for the middle to lower market segments. This situation may cause our industry to be unable to survive. It is not impossible that many workers will lose their jobs, if the weaknesses and deficiencies in management of our furniture industry are not immediately improved.

Improvements and changes that need to be made to our furniture industry cover: management restructuring, appropriate development of technologies and creativity enhancement.

This volume summarizes the ten steps and positive attitude patterns that have been proven capable of saving the industry from the aforementioned threats.

There are two choices for action in facing the above situation. Firstly, to have a positive attitude; and secondly, allowing negative attitudes to creep in. Each choice brings about a different outcome and will determine the fate of our furniture enterprise.



## **A MODEL furniture business**

Views the problems faced as a challenge, attempts to gather information, is open to learning and is willing to change and improve.





## **A RETROGRESSIVE furniture business**

Due to limited information, it views problems as a part of fate. Response to problems is with short-term solutions that are actually self-defeating. It feels it already is conducting the business appropriately, needs no changes, and is not open to change.

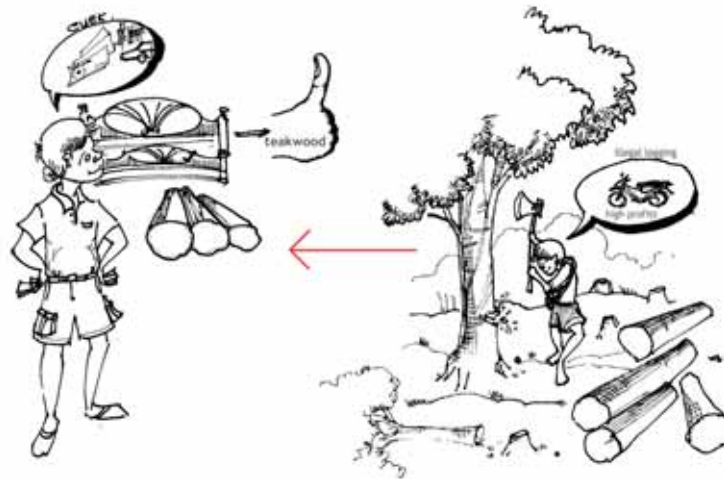
## Choose officially sanctioned wood of good quality and start using alternative woods

- Buy only high quality wood from officially sanctioned sources



## When overly relying on Teak, price considerations take priority over quality

- In the case for high profits, some businesses always look for inexpensive wood and neglect quality. They purchase wood at random with no guarantee of quality, in order to lower production costs.



Choose officially sanctioned wood of good quality and start using alternative woods

- Select wood of a quality suitable to the type of product being manufactured
- Use teakwood only for high quality furniture (carved or exclusive products)



*Teak gains in value if used for top quality furniture, antique furniture, and carved furniture.*

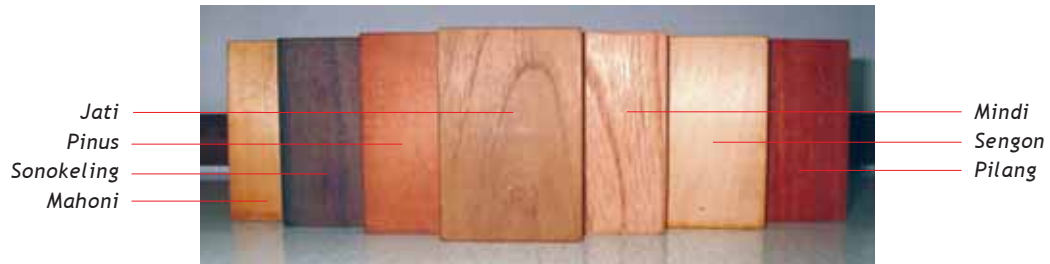
- It always believes that buyers will reject products made of wood other than teak
- Thinking that using alternative woods is troublesome and causes difficulties in production



*Teakwood is too valuable to use for conventional furniture*

Choose officially sanctioned wood of good quality and start using alternative woods

- Suggest to the buyers to utilize wood other than teak for certain types of items (medium-level furniture, furniture for interior use)



- Contributing to the fact that the practice of illegal logging is difficult to halt.



*As a result of uncontrolled logging, fewer teak wood trees are left standing.*



## Results

- The business still runs and can survive, despite teakwood supplies becoming increasingly scarce
- Production costs can be lowered
- Furniture manufactured are of various types, there is no need to expend resources on high-cost materials for conventional products, so that those products can be offered at reasonable prices
- Buyers trust the quality of our products although they are not made of teak
- Buyers are satisfied and will return with new orders
- Contribute to forest conservation efforts



## Results

- Low quality of furniture produced
- Products manufactured are constantly the same type
- Buyers are disappointed by poor-quality products
- Buyers do not return
- Production is disrupted by the reduced supply of teakwood
- Risk of violating the law

## Drying, cutting, preserving and storing wood sections properly

- Understanding that the moisture content is the most significant factor in the manufacture of high-quality furniture
- Producing quality furniture with a moisture content in accordance with the place of delivery
- Purchasing the appropriate measuring equipment
- Factoring in the drying time in calculating length of production and conveying this to the buyer



*Device nail method*



*Natural drying of planks*

## Tendency to complete the order as quickly as possible

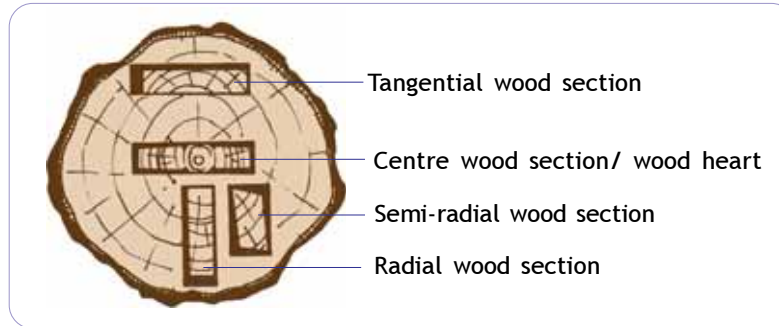
- Desire to make quick sales
- Ignorant of the fact that furniture with a high moisture content can easily crack
- Lack of information on the climate differences in destination countries and its relationship to the furniture's moisture content
- Not knowing that each wood type and thickness need differing drying times and temperatures
- Not factoring in the drying time for the whole production period
- Having the opinion that wood becomes sufficiently dry with random heating under the sun
- Taking the easy way out by conducting sloppy drying through artificial means
- While using a dry kiln, not considering wood type, thickness, temperatures, and drying times
- Too hurriedly drying the wood in the rush for orders


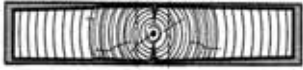



*The furniture is cracked as a result of a hasty production process*

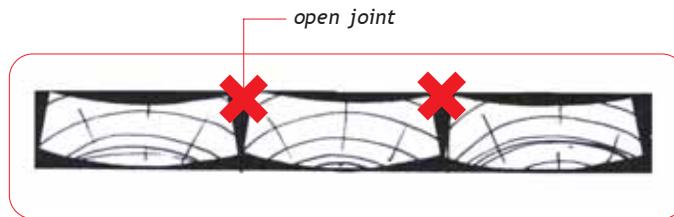


- Know the various types of wood sections—radial, semi-radial, tangential—with their differing characteristics
- Know how to use the correct wood section for each part of the furniture product

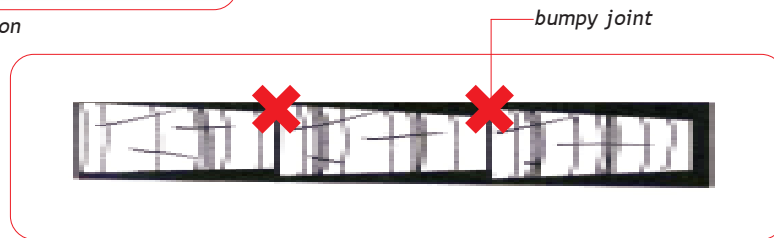


 <b>Tangential Section</b>	 <b>Radial Section</b>	 <b>Semi-radial Section</b>
<ul style="list-style-type: none"><li>• Decorative, beautiful wood fibres</li><li>• Has most unstable plank characteristic</li><li>• Defective shape: twisted curved</li><li>• Type of section most common in cutting logs</li></ul>	<ul style="list-style-type: none"><li>• Decorative, but not as beautiful</li><li>• Most stable plank type</li><li>• Least easy to obtain in cutting of logs</li></ul>	<ul style="list-style-type: none"><li>• Decorative, least beautiful fibres</li><li>• Characteristic: more stable than tangential planks</li><li>• Diagonally defective (diamonding)</li></ul>

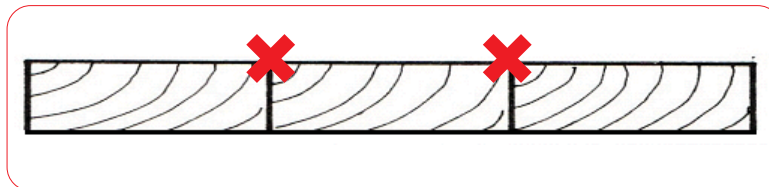
- Taking the quick and easy way out in cutting wood, using the punching method
- Only using tangential-type planks, as they are easiest to obtain
- Ignorant of the fact that from one log, several types of sections can be cut
- Not knowing that for plank expansion, the best results are obtained from radial or semi-radial planks
- Not knowing the proper method of expanding planks



*Expanding planks - tangential wood section*

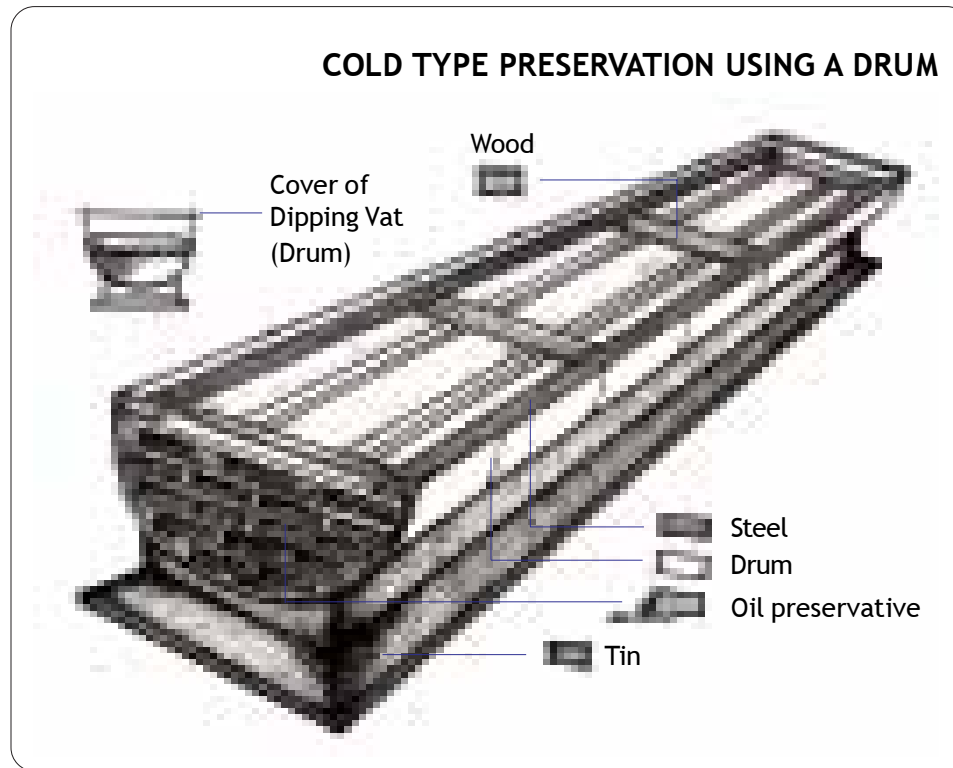


*Expanding planks - radial wood section*



*Expanding planks - semi radial wood section*

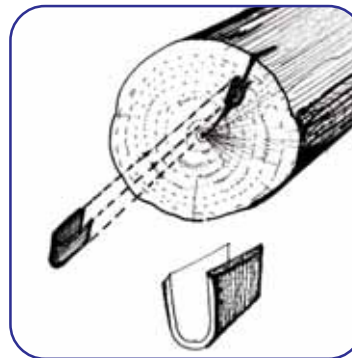
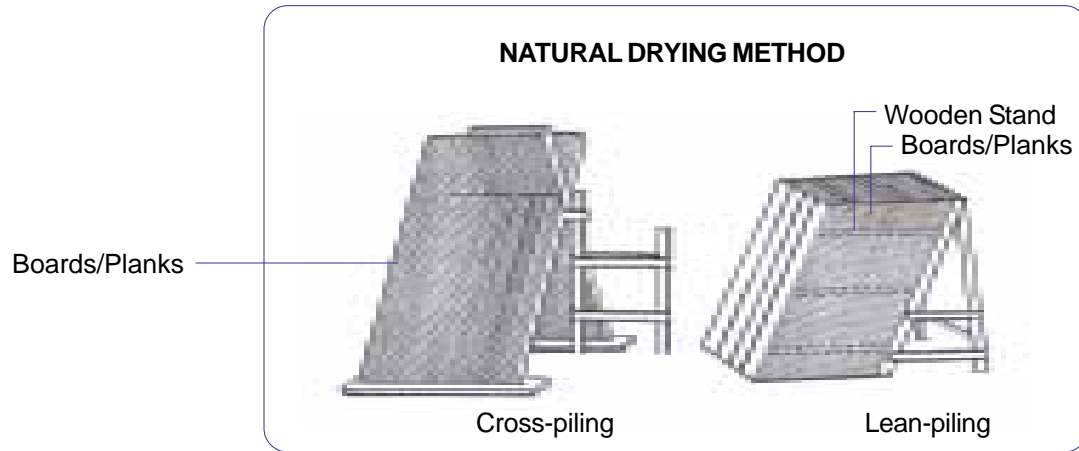
- Using the soaking/dipping method of wood preservation
- Process is conducted with consideration to occupational safety



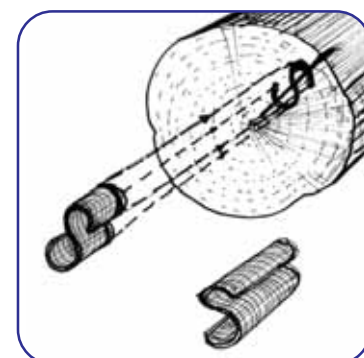
- Not carrying out preservation procedures, considering that finishing alone is sufficient in protecting the furniture
- Preservation conducted, but only through the brushing or spraying methods
- Pays no attention to work safety



- Storing dried boards/planks within an enclosed space, using a stand, with good air circulation, and low humidity
- Storing logs in shade using S- or U-bolts at the ends



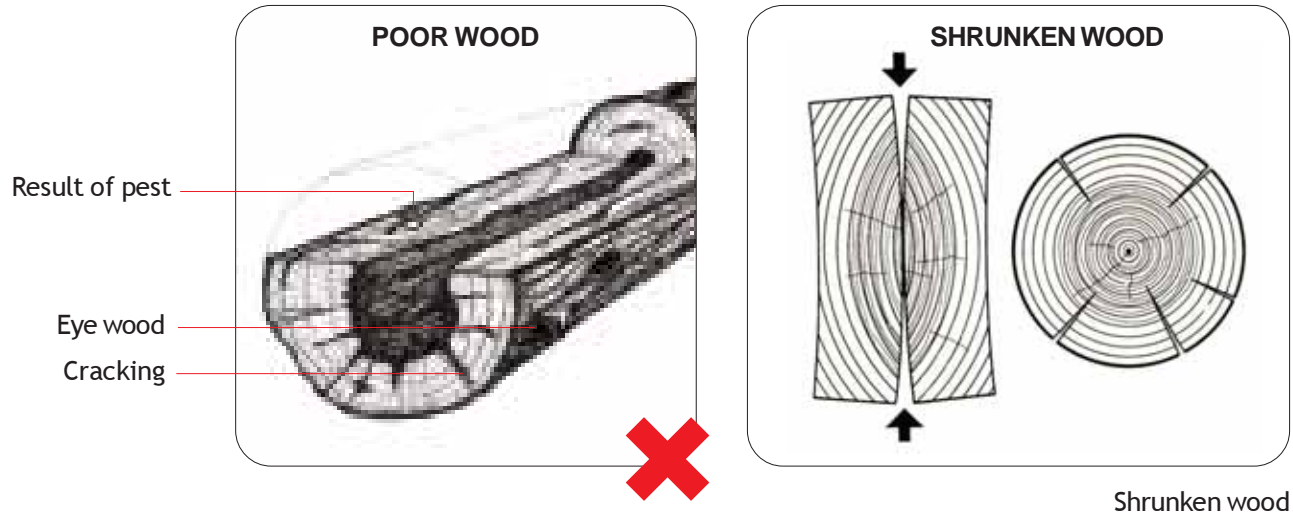
**"U" BOLT**



**"S" BOLT**



- Storing wood in a carelessly-piled manner, with no protection from humidity, heat, rain water, and termites
- Not knowing that planks stored in a random fashion will be damaged (twisting, cracking, fungi) or suffer moisturizing
- Storing logs haphazardly, without protection, not knowing the function of U-bolts and S-bolts



## Results

- Furniture produced is of high quality
- Durable, no cracking although furniture is used in countries with cold climates
- Buyers are satisfied and convinced of the quality guarantee

## Results

- Furniture produced is of poor quality, prone to cracking and falling apart
- Furniture is not durable
- Buyers are disappointed
- Orders stop coming
- Business owners and workers suffer

## Using thrift and wisdom in utilizing wood

- Creating wood-efficient (slim) designs, using wood combined with other materials (rattan, metal, natural fibres, coconut shells)
- Combining several types of wood: the main parts are from teakwood, secondary parts can be alternative woods



**“.....Furniture production, well it's already like that....!”**

- Relying on only a few buyers for orders
- As they already feel quite experienced, underestimating any need for production planning



*Continuously making only this type of furniture*



- Carrying out proper production planning
- Producing good sample furniture to calculate the correct raw material requirements
- Using the right tools, good equipment, so that the wood is cut properly



*Conducting production planning*

“.....Furniture production, well it's already like that....!”

- Not willing to study new designs, only producing certain types of furniture that they know well
- Incapable of proposing design choices or new products to the buyers
- Tendency to imitate other people's designs
- Has the opinion that only furniture made from teak is any good
- Possesses no information on changing market tastes



*Capable of producing only certain types of furniture*

## Results

- Very little wasted wood
- Reasonable production costs that were even further reduced
- Products manufactured have a guaranteed quality
- Variety of products, opening up new markets
- Buyers are impressed by the creativity and become appreciative of combination furniture
- Revenues increase
- Contributes to forest conservation

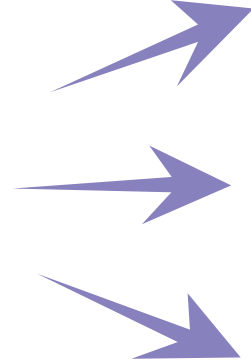


## Results

- Products manufactured have little variety
- Incapable of producing new types of furniture
- Cannot take advantage of changes in market tastes
- Production costs are high, as a result of much wastage in using raw materials
- Gains bad image as a copier of designs

## Utilizing waste wood

- Producing spin-off products from waste wood
- Employs creative workers who can process waste wood to become art objects
- Only disposing of wood sections that can no longer be really utilized
- Offering to the buyer side products available



*Spin-off products from waste wood*

## Not interested in utilizing excess wood, except as fuel

- Never thinks of utilizing excess wood, even if staff have seen handicraft made of waste wood
- Feels expertise is in making furniture, not producing handicraft
- Waste wood in large sections that is actually usable, is piled up along with small wooden pieces, and eventually burned



*Failure to utilize excess wood for handicraft products—only willing to make furniture*



## Results

- Gains other selling points for business
- Gains good image through creativity
- Has opportunity to open up new markets
- Gains extra income

## Results

- Loses opportunity to sell other products besides furniture
- Does not gain additional revenue
- Too lazy to be creative, business lacks stimulation
- When furniture orders are slow, workers become idle

## Planning and calculating production costs with accuracy

- Actively seeking out information on market trends
- Calculating total production costs (electricity, wages of all involved parties, packaging, delivery, administration, equipment maintenance, insurance, quality control expenses etc.) in a meticulous manner
- Making thorough records of orders, precisely and accurately, covering: design, what areas/countries will use the products, for what purpose (inside or outdoors)
- Capable of estimating raw material requirements, production times, level of difficulty in production
- Can set a reasonable price
- Filing all order documents ever received, as items for consideration in further production planning



## Too hasty in accepting orders

- Just waiting for orders to come
- Fixing prices based on “as long as it’s an order”
- Upon receiving orders, they are immediately agreed to without proper calculation of costs
- Basing production costs (purchase of raw materials, cost of labour, etc.) upon the value of the order taken
- Tends to compete for orders by heavy discounting
- As a result of miscalculating, and in order to still make a profit, sacrificing product quality (buying sub-standard raw materials, paying low wages, not taking into account some costs, accelerating the production process)
- Not carrying out proper production planning



*Setting prices based only on estimates.*



## Results

- A smooth production process
- No losses suffered due to miscalculating
- Meeting the order delivery schedule
- Can respond quickly to new orders
- Buyers are happy and trust the business
- Good image



## Results

- Products made are not according to the order
- Thin profit margins or even suffering a loss
- Workers lack enthusiasm due to low wages
- Buyers protest, are disappointed, don't return

# 6

## Arranging the workplace neatly

- The workplace is utilized in the best way possible to facilitate production flow
- Arrangement of machinery is given attention in accordance to their function and the production flow
- Machinery and equipment are well-maintained and neatly arranged
- The workplace has sufficient lighting, is neat and clean, with good air circulation and ventilation.



## A randomly arranged workplace

- Maintaining a neat workplace is not considered important
- Not taking into consideration that workers need a good workplace
- A dark workplace—lacking enough light—messy, with poor air circulation, as well as being stuffy and noisy
- Machinery placement is haphazard, tools are not kept in their cases neatly



*A workplace lacking light and careless work habits*



## Arranging the workplace neatly

- Instill occupational safety principles (machinery with protective guards, dust collectors, face masks for workers, gloves, goggles, fire extinguishers, etc.)
- Employees work well, are enthusiastic and healthy
- Implement discipline in workplace management and maintenance



- Machinery and equipment are not well-maintained
- Careless about work safety principles



## Results

- The production process functions smoothly
- Orders can be filled on time
- Quality of products is guaranteed
- Work accidents are a rare occurrence
- Workers become more enthusiastic and diligent
- Supervision over workers and their work is easier
- No unexpected costs as a result of broken down or lost equipment, and work-related accidents
- Buyer trust is enhanced

## Results

- Production errors occur often
- Difficult to supervise workers and their work
- Employees do not work well
- Workers' health is poor, there is frequent absenteeism due to health-related problems
- Work accidents often occur
- When needed, equipment does not function well
- Quality of goods not guaranteed
- Orders are not filled on time
- Buyers become disappointed, do not return
- Fewer and fewer orders are placed

## Maintaining good relations with workers

- Being aware that workers are the core assets of the business
- Healthy and happy workers are more productive
- Each worker with his/her various skills and functions has an equal role to play
- Understanding that making quality products is a common effort
- Enhancing workers' skills through training sessions and courses
- Establishing work relationships based on a contract and laying out clear assignments and responsibilities
- Providing health benefits and insuring the workers for their safety
- Willing to listen to input from workers and discussing them openly





## ".....You're lucky enough having work!!!"

- Treating workers unfairly, discriminating
- Family members involved in the work do not get decent wages, or conversely are given special treatment
- Arbitrarily setting wages; if the business suffers a loss, workers' wages are cut
- No work contract, unilateral layoffs
- Not inviting workers to participate in discussing company problems
- No concern about enhancement of workers' skills
- Not encouraging workers to use special safety equipment
- Unwilling to bear the burden of risk in occupational accidents



## Results

- The management process functions well
- Keeping permanent, highly-skilled workers
- Workers feel a sense of ownership towards the company
- Productivity increases
- Buyers' trust is enhanced

## Results

- Workers lack enthusiasm
- Quality of products manufactured is not consistent—sometimes good, sometimes bad
- Workers feel no responsibility over the results of their efforts
- No permanent, skilled workers
- Buyers become disappointed

## Maintaining good communication with buyers

- Treat buyers in the best way possible
- No differentiation in treatment of large buyers & small buyers
- Fill the order with a full sense of responsibility (on-time delivery, guaranteed quality, instilling confidence to buyers)
- Unwilling to cause detriment to buyers, unwilling to cheat
- Providing facts to consider and input to the buyer about the product for own improvement and mutual benefit
- Providing a quality guarantee for each product manufactured
- Paying attention to buyer complaints, willing to make improvements and even replace defective products
- Willing to listen to the buyer
- Making the buyer a source of information about market tastes
- Possessing data on buyers, periodically contacting the buyer, offering new types of products, inquiring about the quality of products already bought and used by the buyer
- Has special staff assigned to customer service



**".....The main thing is that some people will buy my furniture, and if they don't return, well.....I'll just find other buyers....."**

- No intent to develop good relations with buyers
- Tendency to attempt to reap greatest amount of profit at the first opportunity in relationship with buyer
- Not caring about buyer complaints and inputs provided by buyer
- Taking an attitude of not being concerned when buyers are disappointed and don't return
- Has the opinion that if one buyer leaves, there will still be other buyers who can become victims
- Not feeling the need to have buyers' data, never communicating with buyers
- Unwilling to learn about what is the current market trend



*Caring only about momentary profits can prove self-destructive*

## Results

- Good long-term relations with the buyers
- Satisfied buyers will return again with new orders
- Will know market developments and changes in market tastes
- Good image will be spread by word of mouth
- Never will lack orders

“.....The main thing is that some people will buy my furniture, and if they don't return, well.....I'll just find other buyers.....”

## Results

- Products stay the same, never developing
- Number of customers do not increase
- Opportunity lost to obtain information on new technology
- Buyers disappointed, never return

## " .....What is important: quality of furniture is superior !!!"

- Practicing quality control over all phases of production (choice of materials, drying, design, construction, finishing, packaging, and delivery)
- Giving clear instructions to the workers regarding quality targets
- Quickly correcting mistakes that occur during the production process
- Having specific workers assigned to control quality
- Making records of buyer complaints (defective products, products falling apart, cracking, damaged finish), and writing down solutions





## Not caring about product quality

- Wants to quickly complete order, and moves on to the next order
- Tends to prioritize short-term gain, not caring about long-term relations
- Not conducting quality control over each stage of production
- Quality control carried out, but not to produce high quality furniture (using wrong measuring equipment)
- No records of buyer complaints
- Has no production plan



*Not knowing the correct method of drying*



*Using wood that still has high moisture*



“ .....What is important: quality of furniture is superior !!!”

## Results

- Buyer trust increases
- New orders come in
- Products always have high quality

## Results

- Poor product quality (not durable, cracking, falls apart, damaged finishing)
- Product rejected
- Payment for orders disrupted
- Opportunity lost to gain profit
- Buyers lost

## Building up a business network

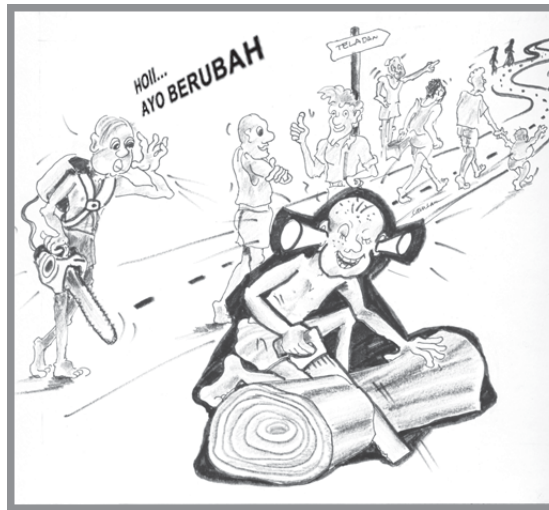
- Grouping together with similar craftsmen in the purchase of raw materials, cutting wood, drying process, transportation, preservation, storage
- Exchanging information and knowledge
- Combined participation in trade exhibitions
- Opening up relationships with research institutions, government agencies, chambers of commerce, industrial associations, universities, community development bodies
- Strengthening the working relationship with business partners (suppliers of production materials, furniture stores, promotional services agencies, transportation companies, communications companies)



*Developing cooperation and working relationships will benefit everyone*

## Not building up a business network

- Considering all other craftsmen as competitors
- Wanting to be the most profitable and most advanced
- Not willing to share information and knowledge
- Feels that nothing more can be done to develop the business
- Not feeling any need to view the situation outside the company



*Feeling one is right, unwilling to change*



## Results

- Bargaining position - with the buyer, government - becomes stronger
- Ripple effect that makes the business environment more dynamic
- Enhances community welfare

## Results

- Closed off from information on changes and developments in the furniture industry
- Trapped in routineness and business burdens
- Isolated

## **A Model Furniture Business**

Never short of orders

Products have high quality and variety

Products competitive and can be exported to various countries

Workers are skilled, productive, and prosperous

High business productivity

The business continues to develop

Buyers keep increasing

Obtains good image

Participates in the effort of forest conservation

Contributes to regional economic growth



## **A Retrogressive Furniture Business**

The business does not develop

Orders keep decreasing

Low productivity

Workers become idle or get laid off

Income drops off

Bad image and this will spread by word of mouth

Goes bankrupt