



Costume  
Jewelry Sector:  
Production  
Management  
Assessment  
Report

June 2008  
Pearl2 Project

Pearl2 Project

Technical Report #3(2008 Series): "Costume Jewelry Sector: Production Management Report"

June 2008

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# 1 Background

The Sectoral Enhancement component of the Pearl2 Project has identified production management as one of the areas for possible intervention to assist the various sectors covered in the component. To determine the specific issues and concerns in these sectors related to production, the Project conducted an assessment of the production management system and process of eight industries covered under Sectoral Enhancement. These are processed mango, costume jewelry, fine jewelry, footwear, leather goods, holiday décor, furniture and housewares. This report presents the findings of the production management assessment study for costume jewelry.

This study was prepared by a team of engineers from the De La Salle University Department of Industrial Engineering. Data on the industry were collected from a survey of production management practices of member firms of the Cebu Fashion Accessories Manufacturers and Exporters Association of the



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Philippines (FAME). A total of 32 companies were surveyed, all based in Cebu. In addition, the team also conducted interviews with representatives of 11 FAME member firms and conducted a plant visit to 11 companies. The team also conducted a conference in Cebu attended by representatives of FAME from whom data on the production process and problems were initially obtained. The information collected was processed and evaluated. Overall, work on the production management assessment of the eight sectors lasted for about six months, from October 2004 to March 2005.

The findings presented in this report are based on information obtained from the FAME members. It is not meant to be a comprehensive study of the production management system of the costume jewelry industry. This report serves to provide indications on the status of production management in the sector as of 2004 and help identify areas where Pearl2 can provide assistance to the industry. This study can also be useful in understanding the basic flow of the manufacturing process for costume jewelry on an industry level.

# 2 Overview of the Manufacturing Process

Costume jewelry is classified under the Philippine Product Standard Classification Code to include the following: articles of glass beads, imitation pearls, precious/semiprecious stones, and similar glassware; imitation jewelry, of base metal, whether or not plated with precious metal; imitation jewelry of other nonprecious materials; buttons of plastics or metals, not covered with textile material, buttons of shells and other materials; combs, hair slides and the likes of hard rubber, plastics or of other materials.

Figure 1 showing the Supply, Input, Process, Output, Customer (SIPOC) diagram illustrates the fundamental inputs and outputs of the industry at the macro level.

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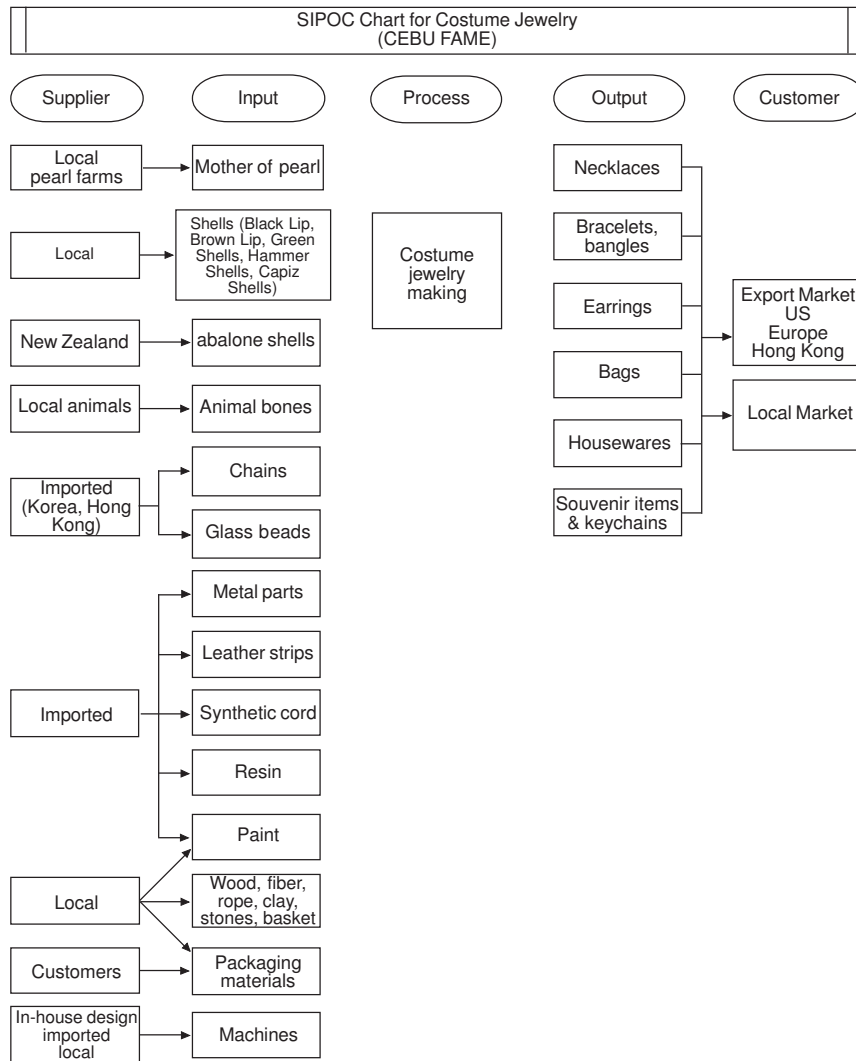


Figure 1 - SIPOC Chart

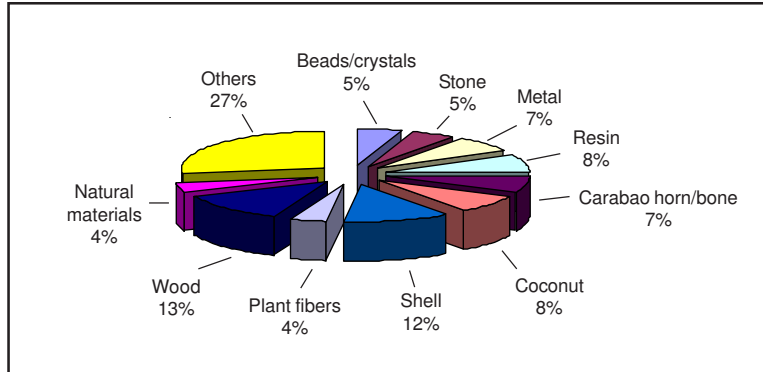
## 2.1 Raw Material Inputs

The industry is diverse in terms of raw materials used. The sector often makes use of indigenous materials such as seashells, coconut shells, wood, bamboo, rattan, fossilized stones, corals, abaca/sinamay, animal bones/horns/nails/ skins/feathers/claws, nuts/seeds and amber. Other materials used include papier-mâché, ceramics, stainless steel and semiprecious stones. Most exporters use different types and combinations of these materials, but a few exporters also specialize in certain indigenous materials.

Components such as sequins, glass and ceramic beads, metal fittings, chemical products (such as adhesives), some paints and dyes, and specific shells which cannot be found in the Philippines are sourced from other countries. Most metal components are imported. Chains and glass beads imported from other countries are perceived to be of better quality than those available locally. Korea and Hong Kong are some suppliers of glass beads in Asia.

The Raw Materials Used chart in Figure 2 shows the breakdown of materials used in the industry. Wood is identified as the most commonly used raw material, followed by shells. Other raw materials used include thread, leaves and grass, clay, bamboo, textiles, abaca, rattan, seeds, sterling silver, plastics, sand art, ceramics, glass, hibiscus, sinamay, saw dust, polyesters, fiberglass, papers, brass and cotton.

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**Figure 2 - Raw Materials Used**

Raw materials are classified as unprocessed, semiprocessed or processed.

Unprocessed materials are materials gathered directly from the natural environment and not yet treated or processed. Unprocessed materials include shells, wood, bones and stones, in their raw or natural form.

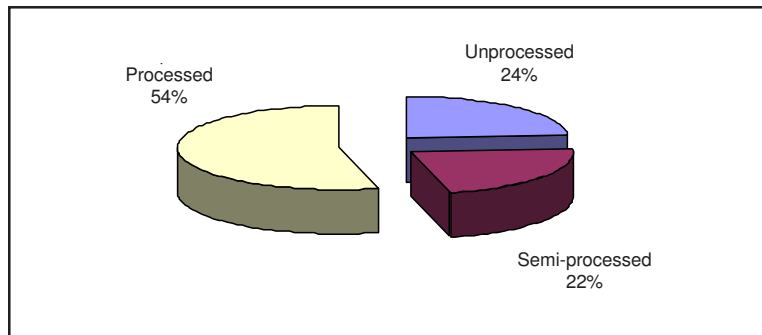
Shells used include mother of pearl (MOP), black lip shells, brown lip shells, green shells, hammer shells, abalone and capiz shells. Capiz shells are very fine, but become sturdier after baking and thinning. Bones of dead animals have to be boiled first to remove animal oils, which make working with the bone material difficult.

Semiprocessed materials are materials processed to some extent by the supplier, but still needing further processing in-house. For example, cut shells, shaped wood and resins can still be glued, painted, dyed or sanded.

Other materials that come in either unprocessed or semiprocessed forms are resin, fiber, rope, clay, leather, basket, stones and bullhorn.

Processed materials are components ready for assembly. These include glass beads, chains, paint, metal parts, synthetic cords, leather strips and packaging materials. Packaging materials, which are also considered processed, include boxes, plastics and printing materials, and are all locally sourced.

Figure 3 shows the breakdown of raw materials in terms of the state in which they are acquired by exporters. Based on the survey response, about 54% of the raw materials come in processed form, 22% in semiprocessed form and 24% in unprocessed form.



**Figure 3 - Breakdown of Raw Material Classification**

## 2.2 Machines & Equipment

Machines are not commonly used in pure costume jewelry firms which are largely dependent on subcontractors. Only a small number of costume jewelry

exporters, most of which also manufacture housewares, invest in and maintain the following equipment:

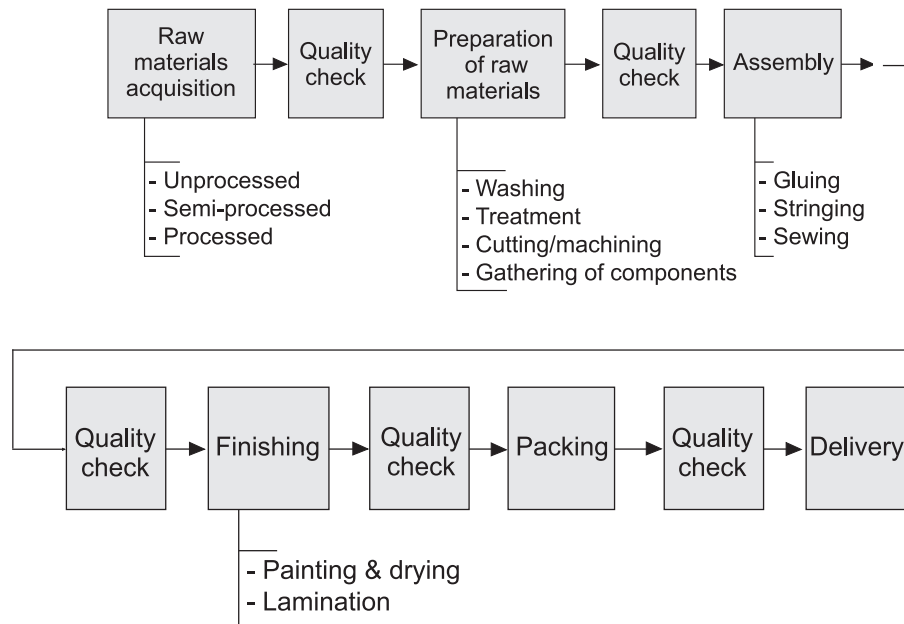
- Carving machine
- Spraying gun
- Punching machine
- Dust collectors
- Bench grinder and bench drill
- Button drilling
- Auto sanding machine
- Diamond cutter (for cutting shells)
- Sewing machine

### 2.3 Personnel

The costume jewelry industry involves the following types of workers:

- Shell gatherers
- Cutters
- Stringers
- Assemblers
- Painters
- Sewers
- Polishers

Quality control inspectors are also largely present in the industry. They are typically assigned in the following stages of production: receiving and inspection of raw materials, assembly, finishing and packing. The production process is illustrated in Figure 4.



**Figure 4 - Costume Jewelry Manufacturing Process**

### Description of the Manufacturing Process

All raw materials are inspected for quality upon acquisition.

At the preparation stage, unprocessed raw materials are usually washed and treated, after which they go through a process called machining, where materials are cut, shaped and sanded. The preparation of materials may be done in-house or by subcontractors. Subcontractors usually supply raw materials in semiprocessed form.

The materials are gathered for assembly after preparation is done. The components are assembled through stringing, gluing or sewing. These tasks may be given to the subcontractors, piece-raters or in-house workers.

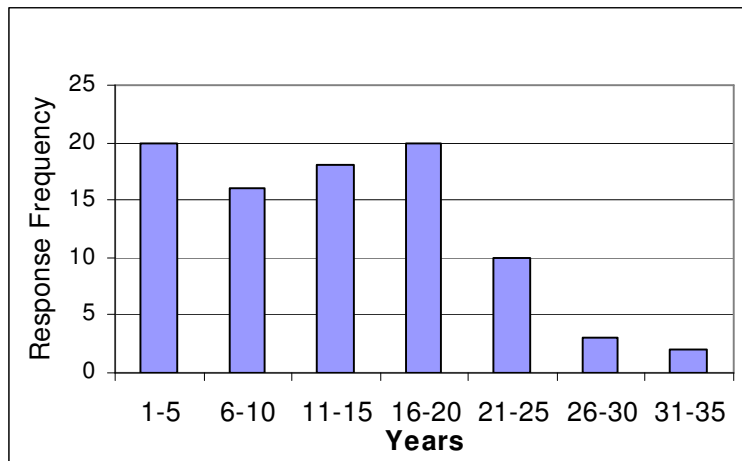
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After assembly, quality control personnel inspect the assembled costume jewelry and return defective items to the workers for rework. In the finishing process, items may be hand-painted, sprayed, laminated and dried. Final inspection is performed before the finished products are packed and delivered.

# 3 Assessment of Manufacturing Practices

The Philippine costume jewelry industry is composed primarily of exporting firms that have direct contact with foreign buyers. These exporters rely heavily on local subcontractors which play a critical role in the costume jewelry sector in Cebu. The industry is highly labor-intensive. A large percentage of its workforce come from families from the local communities.

Figure 5 shows the number of years survey respondents have been in the industry. The industry is mainly composed of companies in the business for at least 10 years. However, there are also a number of new players, firms with less than 4 years of experience.



**Figure 5 - Age of Costume Jewelry Export Firms**

The figures suggest that the industry is not difficult to penetrate and that competition can easily enter. The major reasons for these are:

1. Low investment requirement
2. Low skill requirement for labor
3. Availability of labor force, and
4. Exporters act as a marketing company rather than a manufacturing company.

The costume jewelry industry in Cebu caters to a wide market segment ranging from adults to teens to children. A comparison across companies indicates that some of the exporters focus only on the teen or adult market. Figure 6 shows the proportion of exporters catering to the different market segments.

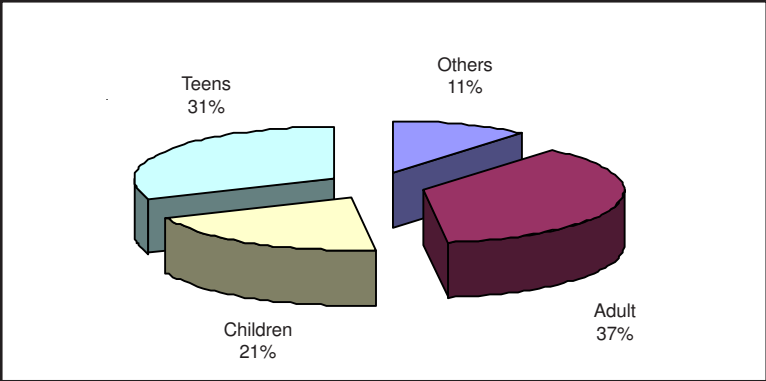


Figure 6 - Industry Market Segment

3.1 Production System

The industry’s production system is predominantly driven by buyers’ custom specifications. Most manufacturing processes are outsourced to subcontractors. In-house production usually includes, but is not limited to, product sample making, assembly or stringing, finishing, quality checking and packing. Cycle time is comprised mostly of in-house quality control activities and raw materials acquisition.

The survey showed that exporters are classified into four major categories in terms of their production output per month (see Table 1).

Table 1 - Classification of Exporters

Category	Volume (units/month)	%
Small (Low Volume)	Less than 25,000 units	48
Medium (Medium Volume)	25,000 - 75,000 units	26
Large (High Volume)	75,000 - 125,000 units	11
Super Large (Very High Volume)	125,000 units and above	15

About 48% of the surveyed exporters fall under the low-volume category, and about 26% are in the medium-volume category. The remaining 26% of respondents belong to the large and very large-volume categories.

Low-volume exporters have been in the business for an average of 17.22 years, whereas medium-volume exporters average around 11.67 years. The average number of operating years for large-volume exporters is 17.5 years, and for very large exporters is 15 years.

From interviews and plant visits, it was observed that low-volume exporters typically locate their operations in their residence. Majority of exporters, regardless of size, started out as family businesses and have grown through the years.

It was found that companies categorized as large and super large typically produce small and inexpensive items, which are ordered in the hundreds to thousands. Most production processes are also subcontracted, with the following exceptions: assembly, final inspection and packing.

On the other hand, low-volume producers cater more to high-end, exclusive markets and orders are usually made in tens to hundreds of pieces. Production is mainly done in-house to protect the designs from being copied. Subcontracting is limited to the production of basic components, which are finished inside the exporter's facility.

### 3.2 Production Capacity

The production capacity of firms is largely flexible due to subcontracting. The availability of several potential subcontractors allows exporters to easily expand and reduce their capacity, as necessary. The production lead time for each order is between 4 to 6 weeks. Subcontractor production period is between 1 and 2 weeks.

During the peak season, costume jewelers can produce up to 172% more than their lean season production.

### 3.3 Seasonality of Demand

Figure 7 shows the months when majority of respondents receive high order requirements from foreign buyers.

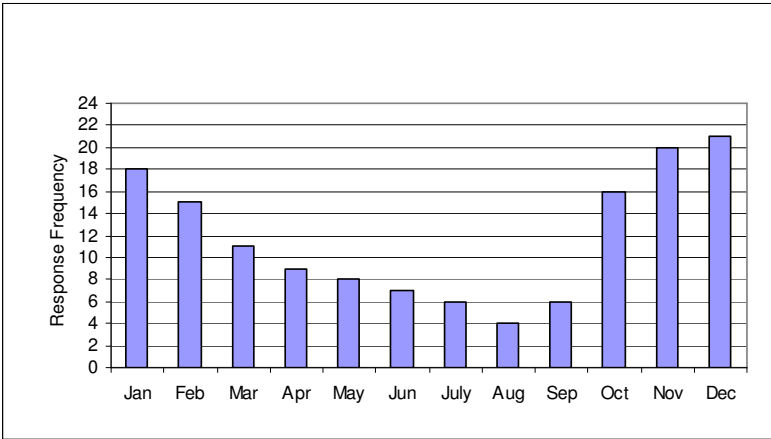


Figure 7 - Production Peak Months

According to the survey, the peak season for costume jewelry normally begins in October. About 25% of exports peak twice a year, during the spring-summer seasons and winter-fall seasons. It has been noted that the costume jewelry industry performs very well during the spring-summer seasons because of the types of materials naturally available in the Philippines.

At the time of the study (March 2005), it was reported that the industry has been experiencing an upswing in the last two years. Output of the costume jewelry industry has increased in recent years.

Costume jewelry is valued between USD\$1 and USD\$5 for inexpensive designs. High-end designs range in price from USD\$10 to USD\$25.

At certain times, many exporters venture into the production of housewares, bags and souvenir items to sustain operations. The raw materials for these items are similar to those used in costume jewelry. It is common for exporters in the housewares industry to also be a part of the costume jewelry industry.

Due to the large demand in costume jewelry, clients tend to absorb and tolerate the inefficiency of the industry. Buyers pay the price dictated by exporters, which also includes cost of inefficiencies. If these buyers find other costume jewelry companies that can offer better designs and better prices (e.g., China), the Philippine costume jewelry industry would have to make their processes more cost-efficient in order to be competitive.

### 3.4 Working Periods

During lean months, regular workers usually work 8 hours a day, 6 days a week; during peak months, workers work 8 hours a day, 6 days a week with an average overtime of 4 hours. A 30-minute break and a 1-hour lunch period are allowed per working day.

For piece-rate workers, the work shift is flexible. There is no limit to how long they work and what time they report. As long as there are orders to fill, workers are motivated to work faster and longer.

### 3.5 Scheduling

Availability of materials and suppliers/subcontractors are the foremost considerations when accepting orders. Scheduling is done on a first-come, first-served basis. However, orders from regular clients are sometimes prioritized as rush orders.

Orders with down payments are scheduled, and materials (unprocessed, semiprocessed and processed forms) are ordered. For confirmed orders with no down payment yet, Purchase Orders (P.O.) and supplier identifications are processed to lessen the possibility of delay. This process can shorten the waiting time of the client by as much as one (1) week.

A work assignment is given to one person if the job involves only a few pieces. For orders with hundred of pieces, work assignments are done by transfer-assembly line. This indicates that there is no formal

method of scheduling production. If an item needs rework, it could be assigned to another worker so that the production line is not disrupted. However, this system could result in lower quality of output. Piece-raters could increase their output to earn more, without giving due attention to the quality of their work.

Production of bags requires a more tedious and rigid schedule. Several subcontractors are engaged to work on different processes, and bags in various states of completion are transferred from one subcontractor to another. This production scheme is employed to protect the design from being copied; no single subcontractor has a sample of the complete product. However, it seems that this method is not fully effective because some companies still report incidents of copying.

The transport of materials from one subcontractor to another may result in the following:

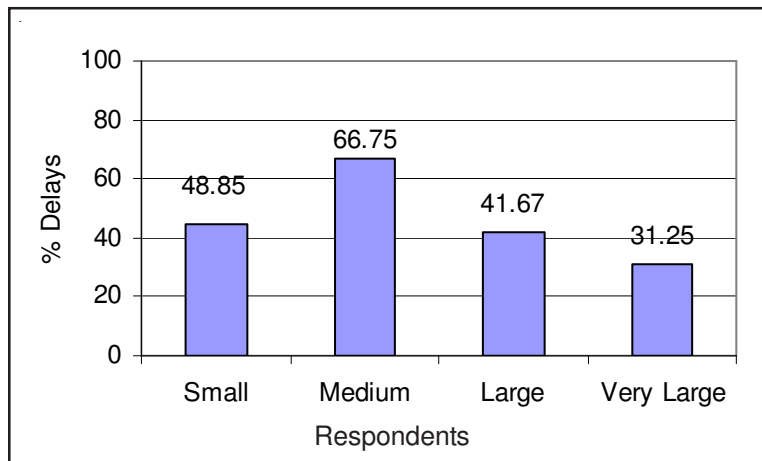
1. Increase of unnecessary materials handling cost
2. Risk of damages
3. Complicated production monitoring
4. Delays in the production schedule

Some exporters also do not have any schedule for in-house sample-making activities. When a sample is needed, a worker is pulled out from production to create the sample. This leads to either a work-in-process buildup or longer development time for new designs.

For subcontracted processes, jobs are assigned on the basis of subcontractors' capacity, loyalty and

performance. Exporters also balance the load assignments to different subcontractors to avoid conflicts and perceptions of unfairness among the subcontractors.

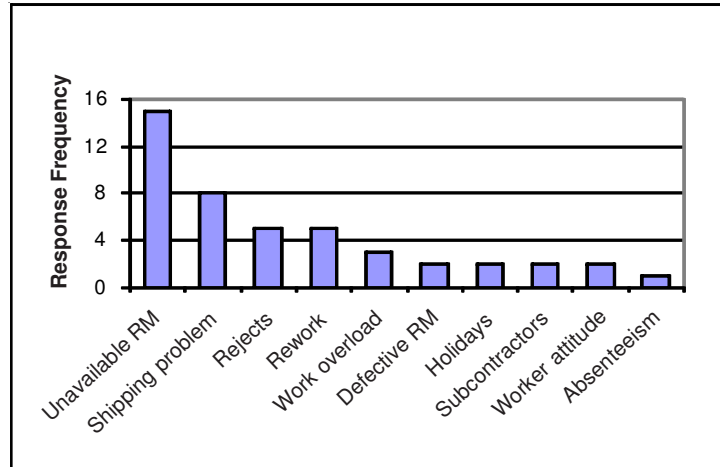
Figure 8 shows the average delays of the four categories of exporters. It can be seen that the highest percentage of delay (66.75%) occurs in the medium-volume category, and the least delay (31.25%) in the very large-volume category. Delays could reach up to two weeks. This indicates the need for the industry to have a better inventory control mechanism to manage the availability and delivery of raw materials.



Note: % delays is computed as the average delays for each category (small, medium, large and very large companies)

**Figure 8 - Average Delays in Delivery**

The common reasons for late deliveries are unavailable raw materials, followed by shipping problems. Rework and rejects are also common occurrences. Figure 9 reflects the other reasons for late deliveries.



**Figure 9 - Reasons for Late Deliveries**

Exporters maintain good client relationships through constant communication, constant introduction of new designs and notification of delivery delays ahead of time.

### **3.6 Production Monitoring**

Exporters make use of simple production forms to record the quantity and quality of orders. These are used to monitor the progress of orders as they move through different processes.

Subcontractors, however, do not have such monitoring practices. Most exporters report difficulties in tracking the actual state of completion of components and finished items assigned to subcontractors, prompting some exporters to hire supervisors to oversee the progress of subcontractors' operations. In effect, subcontracting does not result in less management responsibilities for exporters.

Bottleneck processes vary from exporter to exporter. The typical bottleneck sections are painting, drying, stringing and sewing. Majority of the tasks in the manufacturing process of the exporters involve handling and inspection. It should be noted that these tasks are non-value adding and yet take more time than the actual processing.

In-house production is quicker since production is closely monitored while the quality and cycle time are controlled.

### **3.7 Product Costing**

Subcontractors and exporters do not have a standard means of costing the product and production time. Some exporters allow subcontractors to set the price of labor. Exporters base their costing on visual estimates and experience.

Cost estimates given by subcontractors are not activity-based; rather, they are income-based. Cost estimates are based on whether the subcontractors can survive with the earnings they would get from the volume of job offered.

As a result, some subcontractors are able to sell designs to other exporters at high rates. This practice may not be the right measure of the standard cost or price of a certain product.

On the other hand, some exporters conduct time studies to estimate the cost of their products. The typical sample size used is less than 10. The average time is

taken and factored against the minimum wage. Allowances and skills ratings are not taken into consideration. Some exporters compute their piece-rates based on the minimum wage divided by how many outputs one worker can finish within 8 hours.

When cost reduction is needed, exporters opt to find or source cheaper materials or reduce labor charges instead of focusing on process improvements.

There is a need to evaluate cost or prices offered and develop a standard in pricing, which can promote competitiveness.

### **3.8 Components of Manufacturing Cost**

Manufacturing costs include the costs of raw materials, labor costs, administrative wages, supplies, production overhead, and research and development (R&D).

Raw materials include all inputs included in the final products, and supplies consist of materials used in production, such as paintbrushes and monitoring forms. Labor costs correspond to the direct labor inputs, whereas administrative wages are considered indirect labor. Overhead costs include utilities expenses and other fixed costs. R&D covers expenditures for coming up with new products or process innovations.

Table 2 shows the breakdown of manufacturing costs of the industry. Raw materials comprise more than half of the manufacturing cost, followed by the direct labor cost.

**Table 2 - Manufacturing Cost Distribution of Costume Jewelry Respondents**

Cost Components	Percent
Raw material	51%
Labor	22%
Administrative wages	12%
Supplies	4%
Overhead cost	7%
R&D	2%
TOTAL	100%

### 3.9 Raw Materials

As mentioned earlier, it is estimated the industry purchases about 54% of raw materials in processed form, 22% in semiprocessed form and 24% in unprocessed form.

Exporters order unprocessed materials either as needed or for stock. Exporters that belong to both the costume jewelry and housewares sectors typically order for stock, and firms that produce costume jewelry exclusively usually order materials as needed.

Semiprocessed materials are ordered only when necessary, and processed materials are acquired for stock because they are used often. Imported materials such as glass beads and chains are stocked since the minimum quantity required for purchase is often more than the quantity required at a given time. The lead time for imported raw materials is 1-2 weeks.

Some exporters overstock unprocessed raw materials, especially mother of pearl, because of the high demand for the material in costume jewelry and housewares. They tend to buy the shells at a higher price to stock, and sell them to other exporters that need the shells. Exporters that overstock unprocessed raw materials hedge against possible shortages of raw materials to guarantee their supply for continuous production, but the overstocking could also be the cause of an apparent “shortage” for the industry.

Subcontractors are allowed to source their own materials. Some exporters provide lists of trusted suppliers. Many exporters give subcontractors starting capital to work with. Some firms provide raw materials directly to the subcontractors instead of cash which might be used for other expenditures. Subcontractors sometimes mismanage their cash flow, since most are not trained in production and finance management.

It is possible, however, for subcontractors provided with top-quality raw materials to sell these to other parties for immediate income and to replace the materials with substandard varieties. The use of substandard raw materials results in rework, and leads to additional costs for the exporter.

According to exporters, the number one problem with raw materials is availability, followed by quality and delivery. Price is not considered a problem (see Table 3).

**Table 3 - Raw Material Problems**

Raw Material Problem	Ranking
Availability	1
Quality and delivery	2
Price	3

*Note: Rank 1 as highest and 3 as lowest*

### **3.10 Packaging and Shipment**

Products are packed individually or in specific quantities, depending on the requirements of the buyer. Some clients provide their preferred packaging material. Items are packed by the dozen in poly bags and then packed in boxes.

Some exporters cut their own boxes. This is true especially for exporters in the housewares industry, whose products cannot be packed using conventional boxes.

Exporters shoulder shipping costs, including transport costs of product returns and/or replacements. This practice has compelled exporters to ensure that there are no rejects in orders shipped.

### **3.11 Inventory Monitoring and Control**

Most exporters do not store raw materials; they only order what is needed. Materials require little space for storage because of their size. This is mostly true for necklaces and bracelets, but not for bags.

Since designs change constantly, some imported materials are needed only in small quantities; therefore, exporters cannot avail of bulk discount prices. Also, exporters cannot predict what materials to acquire in advance, except when the designs of an exporter are focused on using a particular material.

Semiprocessed materials are counted and packed prior to assembly by subcontractors. This is a non-value adding activity. Requirements for unprocessed materials, on the other hand, are typically estimated by the exporter or the subcontractor. When initial estimates are inaccurate, subcontractors get more raw materials than required (usually 10%-15% more), and their use of materials may be inefficient. Any excess materials become the property of subcontractors.

Some exporters charge subcontractors or in-house workers for wasteful use of raw materials. This obliges the subcontractors or workers to reduce wastage of supplies and materials.

Since tracking of inventory usage and status requires a lot of paperwork and workers, exporters do not typically make it a practice.

### **3.12 Personnel**

Personnel of small and medium-sized firms are typically made up of the following: owner/s, office assistants, quality control personnel and production supervisors. In the management level, 27.66% are high school graduates, 35.11% are college undergraduates and 37.23% are college graduates. The average age is 25-35. They have been in the company for 4-6 years.

Most exporters have in-house sample makers. The average number of sample makers is 4 to 10 persons. Most regular workers have been in the company for 2 to 5 years. On the average, 8% of regular workers have finished elementary level, 72% have graduated from high school, and 20% are college undergraduates.

Large exporters are more organized and professional, having more function-specific workers.

Operations are usually centralized. All decision making activities are directed to the owner. For example, quality issues, including material and color acceptability, are still brought to the owner for final approval.

Management claims that workers, especially subcontractors, have little or no concept of work professionalism. Workers do not value or take pride in their work. They are primarily concerned with earning money and have little regard for foreign buyers' quality requirements and deadlines.

### **3.13 Compensation**

The Philippine costume jewelry industry categorizes the workforce as follows: daily-rate regular workers, daily-rate contractual workers and contractual piece-rate workers.

Subcontractors are paid per acceptable piece. In the costume jewelry industry, it is a common practice to hire workers and pay on a piece-rate basis.

However, a skeleton crew of regular workers is kept on the payroll. The regular workers consist mainly of quality control personnel, painters and sample makers. Sample makers are included as regular workers to avoid rushing of samples. These tasks typically require skill and experience. Regular daily rate workers are paid the minimum wage.

Stringers, assemblers and packers are usually piece-raters, with the rate averaging Php1.00 to Php2.50 per piece. Piece-raters outnumber the regular daily wage earners by 2.5 times.

According to the interviews, daily-rate workers tend to be less efficient. Some exporters observe that sample makers can make only a small fraction of what a piece-rater can make in a day.

Figure 10 shows the benefits usually given to most regular workers of respondents.

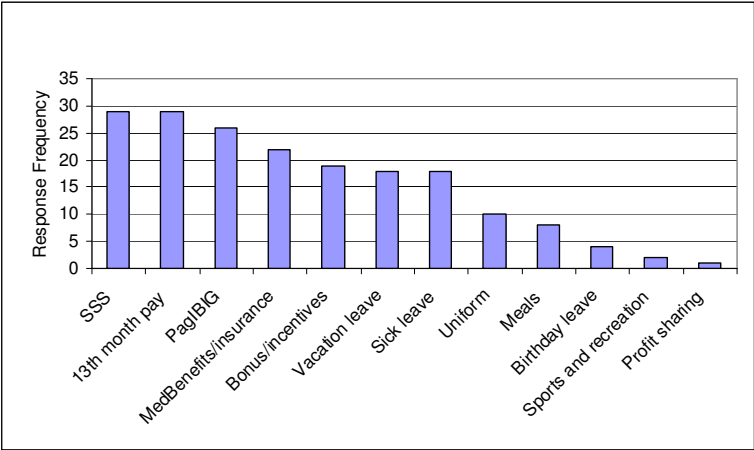


Figure 10 - Employee Benefits

In general, the industry offers only minimal benefits due to subcontracting.

### **3.14 Working Conditions**

It is typical for in-house and subcontracted workers to work in a makeshift environment. The workstations are improvised tables. Tables and chairs are not designed ergonomically, and working postures are often wrong.

Workers are clustered and crowded together in a workstation. The work environment encourages idle chatting, which results in inefficiencies. This is true even for piece-raters. Some workers are also allowed to bring their children. If these distractions are removed or minimized, workers would be able to accomplish more in a given span of time.

### **3.15 Absenteeism**

For in-house production, absenteeism of workers is reported as the common cause of disruption in the production schedule. However, absences are infrequent and cause little disruption in work. Since work is largely subcontracted, it is the responsibility of the subcontractor to deliver as scheduled.

Exporters report only minimal work-related injuries. The highest number of accumulated accidents reported by a respondent is five incidents.

### 3.16 Employee Evaluation

There is no formal evaluation system for regular employees. There are no clear incentives to perform better or increase efficiency.

### 3.17 Subcontractors

Survey results show that about 97% of respondent exporters subcontract work. The industry’s subcontracting companies are nonregistered businesses. Their workers come largely from the low-income classes and have no permanent employment. Homemakers in neighboring barangays also typically work for subcontractors.

On the average, exporters have around 20-25 subcontractors. Some companies, however, have no subcontractors. Subcontractors usually have 5-50 workers. Figure 11 shows that the number of subcontractors does not depend on the volume of orders per month.

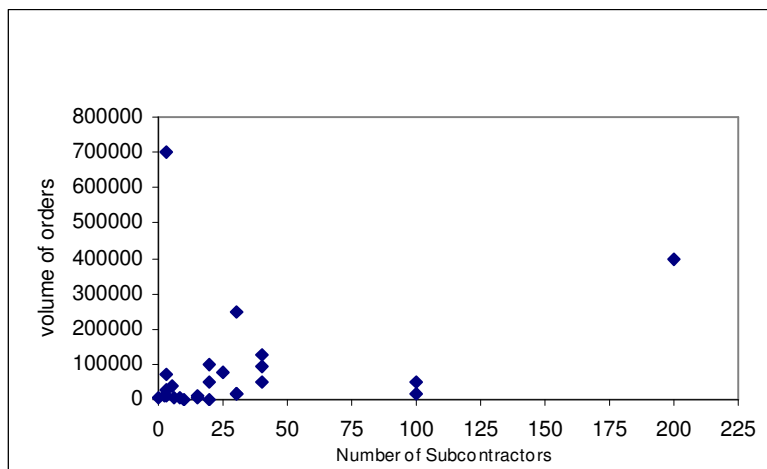


Figure 11 - Number of Subcontractors Used by Respondents

Large and super large exporters seem to manage their few subcontractors well and are productive. Small and medium exporters may have a higher number of subcontractors but may not be effective in handling them.

Most exporters prefer to have several subcontractors. Some exporters work with a limited pool of subcontractors which then get continuous jobs sufficient for their livelihood. Other exporters work with more subcontractors for greater leverage in negotiating price.

In selecting subcontractors, exporters ask them to submit samples which are assessed for quality. The subcontractors' production capacity and machine capability (for items requiring machining processes) are also assessed. Accessibility or proximity may also be used as a basis for selection.

Some exporters invest in their subcontractors by providing them with sewing machines which are paid for in items produced. With the sewing machines, subcontractors improve their capacity and efficiency to fulfill job orders.

Most of the value-adding processes are subcontracted. It takes the subcontractors less than half of the committed delivery period to complete the job order, while in-house production spend the rest of the time performing the non-value adding activities.

Subcontractors also tend to develop their own method of assembly to shorten their cycle time of work.

Their process is not standardized, and as a result there are inconsistencies in output.

Exporters schedule the visits of subcontractors to prevent queuing. Subcontractors deliver the items in partial or complete fulfillment. Subcontractors do not schedule constant production. Rather, they work slowly at the start and rush the work towards the deadline.

Upon receipt of subcontracted materials, exporters conduct 100% quality inspection. As much as 30% of raw materials from subcontractors may be rejected and reworked.

Some exporters provide rework areas to subcontractors to facilitate immediate rework and minimize materials handling. This practice implies that rework is expected from subcontractors.

### **3.18 Skills Training and Development**

Labor availability is never considered a problem in the costume jewelry industry. Skills are said to be readily available in Cebu where people have a “natural talent.” The abundance of labor has led exporters to resort to subcontracting.

Exporters are reluctant to give training to subcontractors because other exporters end up using them.

It should be pointed out that the necessary skill is not really something that a person has to train for. Skill is a little over-rated because the basic skill required in the assembly of costume jewelry items is simple and

easily learned. This can be the argument on why so many subcontractors are being used in the industry. The more significant and important skill requirement is in the processing of natural materials into processed components.

Moreover, from the survey, 74% of the exporters report that new workers can be trained and can join the workforce within a week. The longest reported apprenticeship period for a new worker is four weeks (see Table 4).

**Table 4 - Learning Period of New Workers**

Learning period	% distribution
Up to a week	74%
1 to 2 weeks	17%
2 to 4 weeks	9%

It was observed that SMEs are not focused on improving their production capacity/strategies. They focus more on sales and delivery dates.

### 3.19 Quality Control

Some exporters have no formal inspection scheme. Inspection of in-house output is based on worker skill and reputation. If inspection is done, it is usually done 100%.

Several reworks are done to avoid shipping defective items. Since few or no items are returned by clients, exporters are able to save on costs of replacement and reshipping.

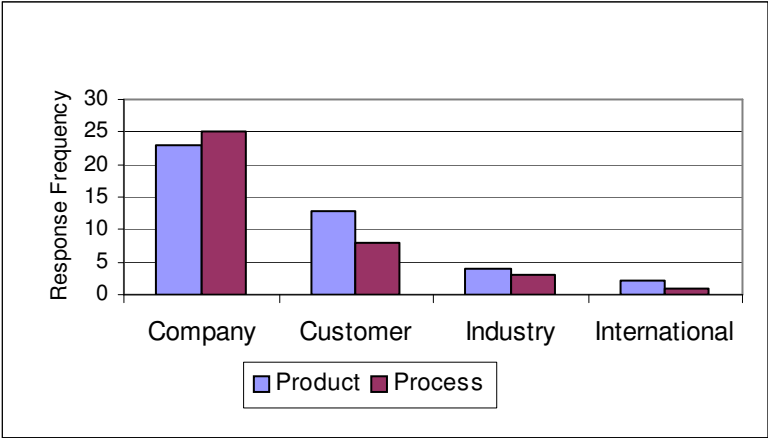


way of inspection is needed to shorten the inspection time. However, it should be noted that the real solution to the problem is better production control.

There are no clear standards of quality. Quality control is too centralized, subject to approval by the owner. Quality procedures cannot be established because quality is based on visual assessment and aesthetics. Samples are provided to subcontractors and quality inspectors to serve as quality standards. However, since the materials are all natural, variations are inherent. This makes it difficult to assess quality.

**3.20 Production Standards**

Figure 13 shows the basis for product and process standards. Product standards are set by the clients and by the company. Sometimes, the exporters have to educate the buyer on the nature of the materials used. Exporters assert that natural materials have variations that contribute to the appeal of the design.



**Figure 13 - Basis for Production Standards**

The exporter typically sets production standards. However processes are not standardized and documented, so workers develop their own methods leading to variations in the output.

The manufacturing process should be designed in such a way that work is standardized.

### 3.21 Facilities Layout and Design

Facility layout is predominantly process-based. This means that work orders go from one process to the next in assigned areas of the factory. Figure 14 shows the different bases for the production layouts of exporters. In general, the layout is arranged to ensure continuous flow of processes, taking into consideration the needed space and available space.

Once standards have been agreed upon through samples, the exporter then sends the samples to the subcontractor to serve as a guide.

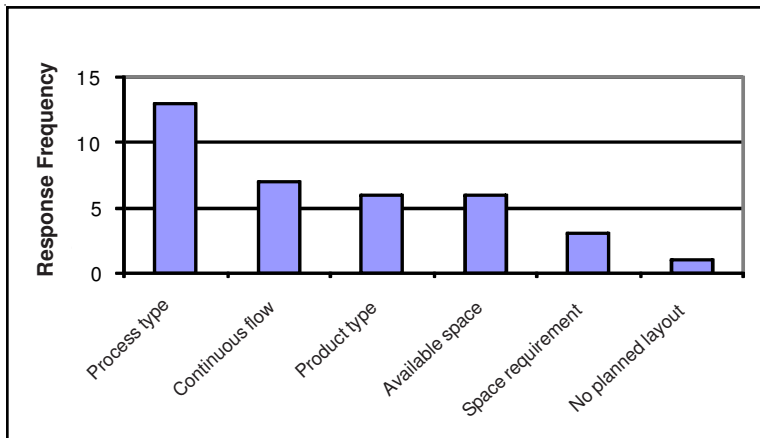


Figure 14 - Basis of Facility Layout

The storage area for raw materials takes up an average 19.33% of total space. Finished goods storage takes up 16.10%. The production area accounts for 37.55% and the finishing area, 26.42%. Most of the space is used for design, quality checking and inventory storage. Exporters invest in a showroom to showcase their designs and entertain clients. Showrooms take up a big area for exporters.

Some work places are disorganized and dusty. Materials are scattered all over the place. Some exporters get suggestions from big clients on how to improve the factory.

About 35.5% of exporters have a workflow that overlaps or crisscrosses across the manufacturing floor. A crisscrossing layout leads to inefficient handling due to too much movement of materials.

Many exporters report that the layout was dictated by available space. This indicates that most businesses started small, grew through the years and expanded but still using the same basic process layout. These exporters turned their houses into factories. This condition may have an effect on the motivation of workers looking for a professional environment.

Some exporters are undergoing changes in their layout due to an increase in available space. In most experienced export companies, facilities have been redesigned on the basis of workflow. A smooth process flow in the factory lessens transportation and handling, and reduces the cycle time of the process. However, material movements are not rationalized so there are still long distances between processes.

A strategic plan to increase or expand the facility layout leads to better operations flow. Larger available capacity/space drives the exporter to innovate, look for more clients and develop more creative designs.

Exporters are not confident that there would be an increase in demand due to the unpredictability of the market. Most believe that there should be an effective market first before they expand. However, exporters would certainly not be able to satisfy higher market requirements if they do not have the capacity.

### **3.22 Machine and Equipment**

The costume jewelry industry does not utilize any advanced or mechanized processes. Majority of the items are handmade. The only major equipment utilized is the polishing and sewing machine. There are also dust collectors situated near the polishing machines.

### **3.23 Machine Utilization**

Production is labor-intensive; therefore machines have low utilization. The dust collector system used is not efficient, and a lot of dust remains uncollected. Besides this, the machine also requires time for set up clean up.

### **3.24 Machine and Equipment Maintenance**

There is no preventive maintenance for machines. About 71% of exporters surveyed conduct machine inspection only when machines are reported to be broken.

Since machines are not used very often, they do not break down frequently and therefore do not require regular maintenance.

### **3.25 Equipment Acquisition and Upgrading**

A few exporters with an engineering background can design machines suitable to their production needs.

Some exporters and most subcontractors are not familiar with tooling, fixtures, jigs, feeds and other basic technologies. These technologies can improve precision in tasks such as boring, cutting and trimming. These will help in mistake-proofing the process and achieving more uniform output. Subcontractors with no knowledge of tooling, fixtures and jigs may produce outputs with poor quality.

When exporters automate processes or implement new programs, workers are reported to be resistant to change, and have difficulty adapting. This may imply that workers may not be ready for advanced technology, even if it increases their efficiency. This could be why exporters are reluctant to invest in machines and new technology.

### **3.26 Product Development**

It takes an average of six months from conceptualization of product design to delivery of orders. Prototypes of new designs are done by sample makers or subcontractors. These prototypes are sent to design fairs where prospective clients can place their orders. Upon

release of purchase orders, the items are assigned to a selected pool of subcontractors for production.

More than 50% of the industries have at most two designers, one of whom is usually the owner. A large volume of designs can be created by adjusting the components, colors and sequences. This is the typical approach of exporters to product development.

Costume jewelers produce as many as 800-1000 designs in a year, but most of these are variations on the same design theme. Product development in the costume jewelry business is quite fast-paced. Development can take from a week to at most a month. The average development time is three weeks. Prototyping can take from a day to two weeks depending on the intricacy of the design and the availability of materials and workers.

Of the several hundred designs brought to the shows, only a few are converted into sales. The low turnover of designs to sales is an indication that the exporters or designers do not know their market very well and usually employ a “hit-or-miss” approach to product design.

Exporters’ use of different and diverse types of materials allows experimentation and innovation in designs. However, efficient processing has to be explored as well. Exporters should consider specializing in certain materials and focusing their R&D on different means of processing these materials. This strategy, however, may have an impact on the creativity of the designs.

Owners usually set the design direction for their companies. Generally, owners hire designers with compatible tastes. This single approach to design may be a reason for the low turnover of designs to sales. Exporters and/or owners may need to be more open to the perspectives of other designers to find new innovations.

Investment in R&D is 2% of the total manufacturing cost. No big investment is needed for R&D because most of the activities involve introducing variations to an initial design to create more designs.

Figure 15 shows the different sources of exporters' designs. The usual sources of ideas for designs are publications, trade fairs, the Internet and client feedback.

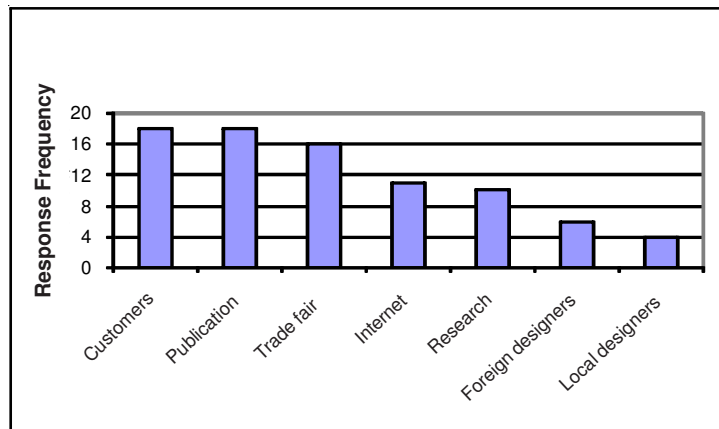


Figure 15 - Sources of Design Concepts

Client ideas are mostly incorporated in designs. Clients often request a change in color, length and

components. Since client ideas are incorporated in designs, products are highly variable and customized.

To address the issue of design piracy, an ethics committee in the industry has implemented penalties or fines for the sector: Php50,000 for copying and Php30,000 for disputes. Despite these disincentives, the issue of design copying has not been resolved. Subcontractors tend to leak the designs of their clients to other exporters for higher profit. As long as there is no copyright protection policy for the industry, this issue is unlikely to be resolved.

R&D needs to be improved not only for product innovation, but also for product presentation in order to attract more clients. Presentation of outputs during shows must enhance and highlight the beauty of the designs.

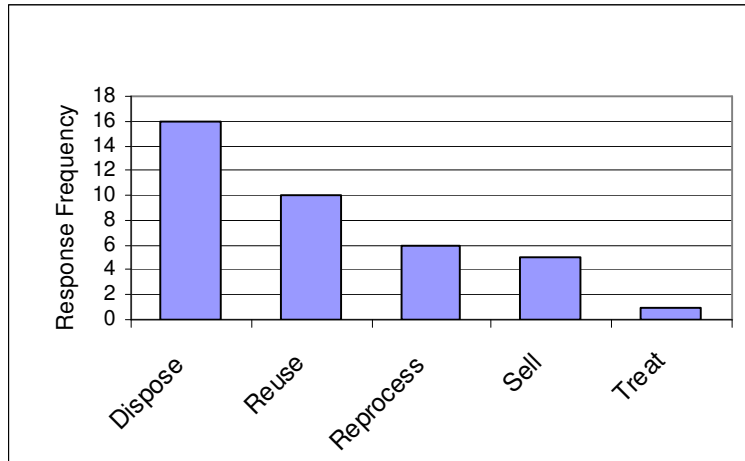
### **3.27 Environmental Management**

The industry generates scraps and dust from the processing of raw materials. Scraps are kept and collected, and later reused for other designs or as input for housewares products. Scraps generated from making housewares products are used for costume jewelry.

Dust is usually produced during polishing and sanding. Dust is collected and disposed of. The health of workers is threatened by dust and fumes inhaled from sanding, cutting and paint spraying because workers usually do not wear masks to protect their nose and lungs from particles.

An average of 5% to 10% of raw material input end up as waste . However, this is only an estimate since

exporters do not measure and monitor wastes. Figure 16 gives the different methods employed by the industry to dispose of their wastes.



**Figure 16 - Methods in Dealing with Waste**

Most exporters comply with environmental laws that restrict the use of endangered species such as corals. According to them, they only use preapproved materials in the Philippines. The most commonly used material is mother of pearl (MOP) obtained from pearl farms. The MOP lines the shells of pearl oysters and mollusks. Before, the flesh of the oyster was eaten, but now it is thrown away and only the shells are used.

Environmentalists also question how wood and animal horns are obtained. Respondents point out that they do not cut down trees for wood but simply make use of tree branches. Animals are not killed to get their horns or parts. Horns grow back, and only parts of dead animals are used.

Since natural raw materials are widely used, there is a possibility that their supply cannot be sustained.

Exporters should explore and make use of sustainable natural materials. A few exporters have been making use of recyclable materials, such as fruit and vegetable peels which people usually throw away. The industry has the potential of leading the drive toward recycling to increase raw material resources and reduce ecological waste.

# 4 Manufacturing Issues and Concerns of the Industry

Costume jewelry companies have many issues and concerns about production management.

## **Personnel**

The costume jewelry industry favors contractual workers paid on a piece-rate basis. These workers work faster and are more efficient. The downside is that some piece-raters stop working if they feel they have earned enough for the day.

The industry will benefit from a training course on metrology (the science of weights and measures or of measurement), design of jigs, fixtures, applied supervisory training and productivity program, values, management skills, basic planning, organizing, implementation and control. The sector may need a resident consultant to provide advice to exporters on improving the manufacturing process.

### **Materials and Environmental Management**

Exporters say that their primary problem with raw materials is availability. Raw materials such as mother of pearl may become scarce when exported for bigger profit or when orders go up. Natural raw materials may be unsustainable in the future.

Since materials are sourced from the Visayas and sometimes from Mindanao, the cost of transport is added to the selling price.

### **Machines and Facilities**

The industry has a Costume Jewelry Center equipped with a wide range of production facilities. The Costume Jewelry Center is supposed to enable all members of the industry to develop prototypes or produce components in volume. However, as of the time of this study (2004-2005), the facilities are not maximized. The casting and electroplating facilities do not match the products made by most of the costume jewelry companies.

### **Production**

Exporters cannot forecast demand for their products so they cannot project the materials needed. Demand for costume jewelry is seasonal. Exporters venture into bags, housewares and other products to sustain production. The inefficiency is absorbed by clients because current market demand remains strong.

### **Subcontractors and Quality Control**

Subcontractor operators are usually former employees. Some subcontractors also export. Subcontractors running an

informal business could have quality problems that may impact the image and reputation of Philippine exporters. For example, subcontractors' output may have a high rejection rate leading to rework.

Subcontractors are not professional in their business arrangements with exporters. Subcontractors need training programs on how to manage their operations. Moreover, subcontractors are not formally registered as business entities. If subcontractors are forced to register and offer benefits to their workers, the price and manufacturing capability of the industry will be affected.

### **Product Development**

Copying of designs remains a problem in the industry. An external threat is posed by Chinese producers which can copy the designs and produce them in large quantities at less time, using much cheaper materials.

The Philippine industry needs a school for designers offering continuous training for specific jobs. To generate more business, the costume jewelry industry may link with the footwear industry for some of the common items they use such as buckles.

The Problem Tree Diagram aims to break down the major problem and identify its root causes.

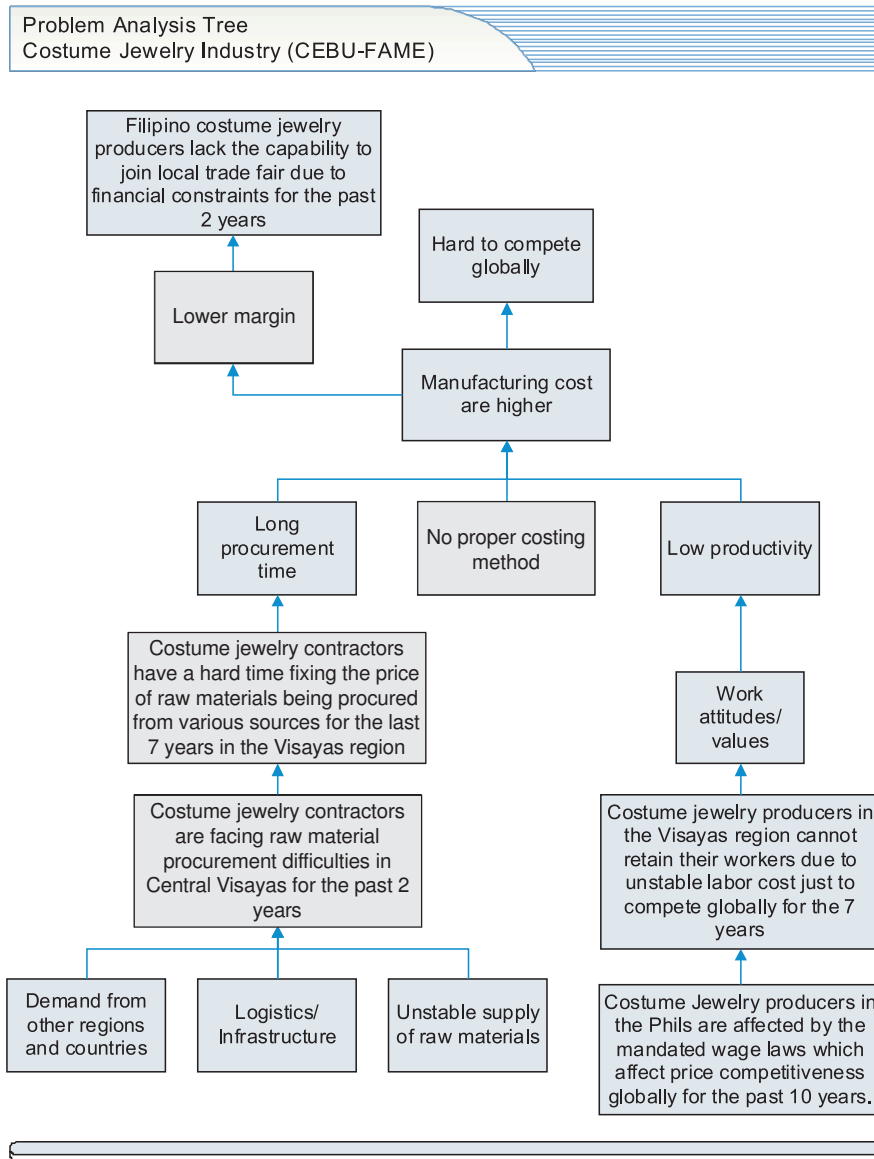


Figure 17 - Problem Tree Analysis

# 5 Sector Recommendations

## Training

The skills for costume jewelry making are easily acquired, but the industry's training needs are many.

Management should get training on human resource management and attend an Executive Management Development program.

Training on the following subjects will improve production management:

- a. Methods engineering
- b. Design of jigs and fixtures
- c. Time and motion study
- d. Statistical process control
- e. Sampling and inspection techniques

- f. Facilities planning and payout
- g. Ergonomic design

Training needs vary depending of the size of operations.

Small exporters should get training on scheduling of orders and workers, and activity-based costing. The costing procedure for materials, labor and overhead cost should be activity-based costing.

Medium exporters should get training on scheduling of orders and workers, and activity-based costing. They should provide supervisory skills training to supervisors.

Large exporters should get training on activity-based costing and training on maintenance and breakdown of machines. They should provide supervisory skills training to supervisors

Subcontractors have to be professionalized. They should get training on scheduling of orders and workers. Training in the following subjects are also recommended:

- a. Production scheduling and monitoring
- b. Inventory control
- c. Waste management
- d. Quality control
- e. Product costing, and
- f. Most importantly, business ethics and work values

### **Inventory Control**

Monitoring forms and system may be developed to have a better inventory control mechanism to manage the availability and delivery of raw materials for small and medium exporters. Tracking of items from subcontractors should also be improved.

### Cost Reduction

Exporters in the industry have to reduce their cost to become competitive. Cost reduction can be achieved by increasing efficiency and reducing cycle time. This can be accomplished by doing the following:

- a. Reduce/Eliminate non-value adding tasks in the process
- b. Lower production rejects
  - Standardize production processes by time study
  - Make use of jigs and fixtures to ensure consistency of output
- c. Improve quality control method and procedure
  - Apply quality control tools. For high volume production, use Statistical Process Control (SPC) tools to monitor the process. For quality inspection, instead of 100% inspection, adopt sampling methods.
  - Establish product standards.
  - Establish materials standards.
- d. Identify and improve bottleneck operation
- e. Improve production process and methods
  - Design jigs, fixtures and tooling to improve accuracy and precision in performing tasks
  - Review current methods and motion; design better motion and methods.
- f. Improve layout to take into consideration flow, volume and distances in between flows.
- g. Motivate workers and develop worker skills

- Formalize the working environment. Some companies must shift out from residences turned into factories.
  - Require workers to wear protective masks to protect their lungs from harmful dust and fumes.
  - Set up a formal evaluation system that offers rewards and penalties.
  - Give longer training period to workers, including training on Good Manufacturing Practices (GMP), quality and work values.
- h. Improve workstations to take into consideration the human factors and worker efficiency.

#### Other Improvements

The following recommendations will address the other concerns of the industry:

- For small and medium companies to grow there is a need to develop a long-range plan for expanding their facilities. Subcontractors must also expand as the exporters grow.
- A better compensation scheme could be adopted to ensure productivity especially of regular daily-rate production workers.
- The dust collector system used by costume jewelry and housewares exporters needs to be redesigned.
- A research on market needs and wants may be conducted to improve the design efficiency of the industry. Being open to new designs/designers' perspectives may also improve design efficiency.

- The industry needs to develop a pool of consultants or experts on the drying and dyeing of indigenous materials.
- The supply of raw materials should be made sustainable by driving the community into recycling to increase raw materials resources and reduce ecological waste. Processing of recyclable materials for costume jewelry has to be studied.
- The industry needs to review the Labor Code on subcontracting.
- The industry should take up an advocacy for lower domestic shipping costs, lower tariffs in imported raw materials and banning of export of indigenous materials.

#### **Areas for Further Study**

Production management will benefit from an in-depth study of subcontractors' capabilities. To improve design efficiency, a study on the efficiency of new designs versus designs that actually generate sales will also prove helpful.



# A n n e x e s

Note on annexes for Production Management Assessment of Costume Jewelry Report.

The following section presents the data derived from a survey of costume jewelry companies on their production management status and practices. The information has been organized and arranged in 27 separate annexes, each focusing on a specific aspect of the respondents' production management function. All the respondents are from Cebu. Whenever applicable, a frequency distribution of the data per topic has been provided. However, please note that due to rounding of numerical data, the totals of some of the percentage distributions may not add up to 100%. For the reader's reference, a copy of the blank survey form used to gather the information for this report is presented in Annex 28.

## Annex 1: Major Product Line

What is the main business of the company?		
<i>Major Product Lines</i>	f	%
Costume Jewelry Only	15	45.5
Costume Jewelry and Fine Jewelry	3	9.1
Costume Jewelry and Housewares	6	18.2
Costume Jewelry and Holiday Decors	1	3
Costume Jewelry and Leather Goods	2	6.1
Costume Jewelry and Others	1	3
Costume Jewelry, Housewares, and Leather Goods	1	3
Costume Jewelry, Holiday Decors, Footwear	1	3
Costume Jewelry, Housewares, and Holiday Decors	1	3
Costume Jewelry, Footwear, and Leather Goods	1	3
Costume Jewelry, Fine Jewelry, Footwear and Leather Goods	1	3
Total	33	100
What is the percentage of revenue derived from Costume Jewelry?		
<i>Percentage of Revenue Derived from Costume Jewelry</i>	f	%
41% to 60%	7	21.2
61% to 80%	8	24.2
81% to 99%	3	9.1
100%	15	45.5
Total	33	100

## Annex 1: Major Product Line (cont)

What is the percentage of revenue derived from Fine Jewelry?		
<i>Percentage of Revenue Derived from Fine Jewelry</i>	f	%
0	29	87.9
1% to 20%	2	6.1
21% to 40%	1	3
41% to 60%	1	3
Total	33	100
What is the percentage of revenue derived from Housewares?		
<i>Percentage of Revenue Derived from Housewares</i>	f	%
0	25	75.8
1% to 20%	3	9.1
21% to 40%	4	12.1
41% to 60%	1	3
Total	33	100
What is the percentage of revenue derived from Holiday Decor?		
<i>Percentage of Revenue Derived from Holiday Decor</i>	f	%
0	30	90.9
1 to 20%	3	9.1
Total	33	100
What is the percentage of revenue derived from Footwear?		
<i>Percentage of Revenue Derived from Footwear</i>	f	%
0	30	90.9
1% to 20%	3	9.1
Total	33	100

## Annex 1: Major Product Line (cont)

What is the percentage of revenue derived from Leathergoods?		
<i>Percentage of Revenue Derived from Leathergoods</i>	f	%
0	28	84.8
1% to 20%	3	9.1
21% to 40%	2	6.1
Total	33	100
What is the percentage of revenue derived from Other Products?		
<i>Percentage of Revenue Derived from Other Products</i>	f	%
0	32	97
1% to 20%	1	3
Total	33	100
Summary of percentage for sources of Revenue		
<i>Revenue Percentages</i>	%	
Costume Jewelry	84.1	
Fine Jewelry	3.2	
Housewares	6.7	
Holiday Decor	0.8	
Footwear	0.9	
Leathergoods	3.3	
Others	0.2	
Total	100	

## Annex 1: Major Product Line (cont)

What is the percentage of Export Sales to total product sales?		
<i>Percentage of Export Sales</i>	f	%
21% to 40%	1	3
61% to 80%	1	3
81% to 99%	8	24.2
100%	23	69.7
Total	33	100
What is the percentage of Local Sales from total product sales?		
<i>Percentage of Local Sales</i>	f	%
0	23	69.7
1% to 20%	9	27.3
21% to 40%	1	3
Total	33	100
Weighted Distribution of Local and Export Sales		
	Export	Local
Percentage of Sales	93.1	3.9

## Annex 2: Working Schedule

Which of the following holidays does the company observe? (No work on these days)		
<i>Summary of Holidays Observed</i>	f	%
New Year's Day (Jan 1)	31	93.9
Christmas (Dec 25)	29	87.9
All Saints Day (Nov 1)	28	84.8
New Year's Eve (Dec 31)	28	84.8
Independence Day (Jun 12)	24	72.7
All Souls' Day (Nov 2)	23	69.7
Holy Week (Thursday to Sunday)	20	60.6
Labor Day (May 1)	20	60.6
Bonifacio Day (Nov 30)	17	51.5
Rizal Day (Dec 30)	17	51.5
Araw ng Kagitingan (Apr 9)	13	39.4
Ramadan (Nov 15)	13	39.4
EDSA Rvolution (Feb 25)	10	30.3
Ninoy Aquino Day (Aug 21)	9	27.3
December 26	9	27.3
Others	9	27.3
City Day	8	24.2
Town Fiesta	7	21.2
December 27, 28 and 29	1	3
Company Anniversary	1	3
How long are total merienda breaks per shift?		
<i>For Daily Workers</i>	f	%
1-15 Minutes per Shift	15	45.5
16-30 Minutes per Shift	14	42.4
No Response	4	12.1
<b>Total</b>	<b>33</b>	<b>100</b>

## Annex 2: Working Schedule (cont)

Are workers paid during these breaks?		
<i>For Daily Workers</i>	f	%
Yes	28	84.8
No	1	3
No Response	4	12.1
Total	33	100
How long are total merienda breaks per shift?		
<i>For Piece-Rate Workers</i>	f	%
No Merienda Breaks for Piece-Rate Workers	6	18.2
1-15 Minutes per Shift	5	15.2
16-30 Minutes per Shift	6	18.2
Invalid Response	1	3
No Response	15	45.5
Total	33	100
Does the production cycle have peak and lean seasons?		
<i>Production with Peak or Lean Seasons</i>	f	%
Yes	25	75.8
No	1	3
No Response	7	21.2
Total	33	100

## Annex 2: Working Schedule (cont)

Please indicate the peak and lean months of production.				
<i>Peak and Lean Months of Production</i>	Peak		Lean	
	f	%	f	%
January	17	51.5	8	24.2
February	14	42.4	11	33.3
March	10	30.3	15	45.5
April	8	24.2	17	51.5
May	7	21.2	18	54.5
June	6	18.2	19	57.6
July	5	15.2	20	60.6
August	3	9.1	22	66.7
September	5	15.2	20	60.6
October	14	42.4	11	33.3
November	19	57.6	6	18.2
December	20	60.6	5	15.2
What is the average number of working days per week?				
<i>Average Number of Working Days per Week</i>	Peak		Lean	
	f	%	f	%
5 days	2	6.1	2	6.1
5 and a half days	1	3	0	0
6 days	22	66.7	19	57.6
6 and a half days	1	3	0	0
7 days	4	12.1	0	0
Others	0	0	2	6.1
No Response	3	9.1	10	30.3
Total	33	100	33	100

## Annex 2: Working Schedule (cont)

What is the average number of regular working hours per day?				
<i>Average Total Regular Hours per Day (including all shifts)</i>	Peak		Lean	
	f	%	f	%
8 hours	24	72.7	23	69.7
12 hours	5	15.2	0	0
16 hours	1	3	0	0
No Response	3	9.1	10	30.3
<b>Total</b>	<b>33</b>	<b>100</b>	<b>33</b>	<b>100</b>
What is the average total of overtime hours per day?				
<i>Average Total Overtime Hours per Day (time in excess of regular working hours)</i>	Peak		Lean	
	f	%	f	%
No overtime	2	6.1	23	69.7
1 hour	2	6.1	0	0
2 hours	6	18.2	0	0
3 hours	3	9.1	0	0
4 hours	14	42.4	0	0
Others	3	9.1	0	0
No Response	3	9.1	10	30.3
<b>Total</b>	<b>33</b>	<b>100</b>	<b>33</b>	<b>100</b>
How many shifts are there in a day?				
<i>Number of Shifts in a Day</i>	Peak		Lean	
	f	%	f	%
1 shift per day	29	87.8	23	69.7
2 shifts per day	1	3	0	0
No Response	3	9.1	10	30.3
<b>Total</b>	<b>33</b>	<b>100</b>	<b>33</b>	<b>100</b>

### Annex 3: Production Requirement and Production Capacity

What is the percentage increase of production requirement from lean to peak months?		
<i>% Increase from Lean to Peak Months</i>	f	%
No Increase	1	3
Less than 50%	4	12.1
50% to 100%	2	6.1
101% to 250%	7	21.2
251% to 500%	2	6.1
501% to 1000%	1	3
Above 1000%	1	3
No Response	15	45.5
Total	33	100
Classification of Exporters		
<i>Category</i>	Volume (units/month)	%
Small (Low Volume)	Less than 25,000 units	48
Medium (Medium Volume)	25,000 – 75,000 units	26
Large (High Volume)	75,000 – 125,000 units	11
Very Large (Very High Volume)	125,000 units and above	15

## Annex 4: Working Conditions

What is the average number of occurrences of accidents/injury cases in a year?		
<i>Average Occurrences of Accidents / Injury Cases in a Year</i>	f	%
Never Had Accidents / Injuries	19	57.58
1-5 Times / Year	11	33.33
Total	3	9.09
What are the benefits received by company workers?		
<i>Benefits</i>	f	%
SSS Benefits	29	87.9
13th Month Pay	29	87.9
Bonus/Incentives	19	57.6
Pag-Ibig	25	75.8
Uniform	10	30.3
Meals	8	24.2
Profit Sharing	1	3
Medical Benefits/Insurance	23	69.7
Vacation Leave	17	51.5
Sick Leave	18	54.5
Birthday Leave	4	12.1
Sports and Recreation	2	6.1
Others	3	9.1

## Annex 5: Manpower Assessment

Does your company have production schedulers?		
<i>Presence of Management Personnel in company per</i>	f	%
Yes	21	63.6
No Response	12	36.4
Total	33	100
Does your company have inventory managers?		
<i>Presence of Inventory Managers</i>	f	%
Yes	22	66.7
No Response	11	33.3
Total	33	100
Does your company have warehouse supervisors?		
<i>Presence of Warehouse Supervisors</i>	f	%
Yes	21	63.6
No Response	12	36.4
Total	33	100
Does your company have quality controllers?		
<i>Presence of Quality Controllers</i>	f	%
Yes	30	90.9
No Response	3	9.1
Total	33	100
Does your company have production workers?		
<i>Presence of Regular Production Workers</i>	f	%
Yes	28	84.8
No	3	9.1
Invalid Response	1	3
No Response	1	3
Total	33	100

## Annex 5: Manpower Assessment (cont)

Does your company have daily contractual workers?		
<i>Daily-Rate Contractual Workers</i>	f	%
Yes	13	39.4
No	13	39.4
Invalid Response	1	3
No Response	6	18.2
Total	33	100
Does your company have piece-rate contractual workers?		
<i>Hiring of Piece-Rate Contractual Production Workers</i>	f	%
Yes	17	51.5
No	9	27.3
No Response	7	21.2
Total	33	100

## Annex 5: Manpower Assessment (cont)

How many male or female production schedulers does your company have?				
<i>Number of Male or Female Production Schedulers</i>	Male		Female	
	f	%	f	%
1 Production Scheduler	3	9.1	12	36.4
2 Production Schedulers	2	6.1	0	0
3 Production Schedulers	0	0	1	3
4 Production Schedulers	0	0	1	3
5 Production Schedulers	0	0	1	3
6 Production Schedulers	0	0	1	3
7 Production Schedulers	0	0	1	3
8 Production Schedulers	0	0	1	3
No Response	28	84.8	15	45.5
Total	33	100	33	100
How many male or female inventory managers does your company have?				
<i>Number of Male or Female Inventory Managers</i>	Male		Female	
	f	%	f	%
1 Inventory Manager	5	15.2	9	27.3
2 Inventory Managers	1	3	3	9.1
3 Inventory Managers	0	0	1	3
4 Inventory Managers	0	0	1	3
No Response	27	81.8	19	57.6
Total	33	100	33	100

## Annex 5: Manpower Assessment (cont)

How many male or female warehouse supervisors does your company have?				
<i>Number of Male or Female Warehouse Supervisors</i>	Male		Female	
	f	%	f	%
1 Warehouse Supervisor	8	24.2	9	27.3
2 Warehouse Supervisors	1	3	1	3
3 Warehouse Supervisors	1	3	0	0
4 Warehouse Supervisors	0	0	1	3
No Response	23	69.7	22	66.7
Total	33	100	33	100
How many male or female quality controllers does your company have?				
<i>Number of Male or Female Quality Controllers</i>	Male		Female	
	f	%	f	%
1 Quality Controller	4	12.1	6	18.2
2 Quality Controllers	1	3	7	21.2
3 Quality Controllers	0	0	7	21.2
4 Quality Controllers	1	3	2	6.1
5 Quality Controllers	1	3	3	9.1
6 Quality Controllers	1	3	0	0
8 Quality Controllers	0	0	1	3
13 Quality Controllers	0	0	1	3
15 Quality Controllers	0	0	1	3
25 Quality Controllers	0	0	1	3
No Response	25	75.8	4	12.1
Total	33	100	33	100

## Annex 5: Manpower Assessment (cont)

How many male or female regular production workers does your company have?				
<i>Number of Male or Female Regular Production Workers</i>	Male		Female	
	f	%	f	%
0 Regular Production Worker	2	6.1	2	6.1
1 Regular Production Worker	1	3	0	0
3 Regular Production Workers	3	9.1	1	3
4 Regular Production Workers	4	12.1	2	6.1
5 Regular Production Workers	2	6.1	0	0
6 Regular Production Workers	0	0	2	6.1
8 Regular Production Workers	1	3	2	6.1
10 Regular Production Workers	1	3	1	3
11 Regular Production Workers	1	3	0	0
13 Regular Production Workers	1	3	0	0
14 Regular Production Workers	0	0	1	3
15 Regular Production Workers	2	6.1	0	0
20 Regular Production Workers	0	0	1	3
24 Regular Production Workers	1	3	0	0
25 Regular Production Workers	0	0	1	3
29 Regular Production Workers	0	0	1	3
30 Regular Production Workers	2	6.1	0	0
34 Regular Production Workers	1	3	0	0
48 Regular Production Workers	0	0	1	3
60 Regular Production Workers	1	3	1	3
120 Regular Production Workers	1	3	0	0
180 Regular Production Workers	0	0	1	3
Invalid Response	1	3	0	0
No Response	8	24.2	9	27.3
Total	33	100	33	100

## Annex 5: Manpower Assessment (cont)

What is the average number of daily rate contractual workers per workday?				
<i>Average Number of Contractual Workers per Workday (includes all shifts)</i>	Peak		Lean	
	f	%	f	%
0 Contractual Worker	0	0	6	18.2
3 Contractual Workers	0	0	1	3
8 Contractual Workers	1	3	0	0
10 Contractual Workers	4	12.1	0	0
15 Contractual Workers	1	3	0	0
16 Contractual Workers	1	3	0	0
18 Contractual Workers	1	3	0	0
20 Contractual Workers	2	6.1	0	0
24 Contractual Workers	1	3	1	3
30 Contractual Workers	2	6.1	1	3
No Response	20	60.6	24	72.7
<b>Total</b>	<b>33</b>	<b>100</b>	<b>33</b>	<b>100</b>
What is the estimated number of piece-raters hired per workday?				
<i>Estimated Number of Piece-Raters Hired</i>	Peak		Lean	
	f	%	f	%
No Piece Rate Workers	0	0	3	9.1
1 to 5 Piece Rate Workers	0	0	1	3
6 to 10 Piece Rate Workers	0	0	1	3
11 to 20 Piece Rate Workers	0	0	3	9.1
1 to 20 Piece Rate Workers	8	24.2	0	0
21 to 40 Piece Rate Workers	4	12.1	0	0
21 to 50 Piece Rate Workers	0	0	2	6.1
41 to 60 Piece Rate Workers	1	3	0	0
61 to 80 Piece Rate Workers	1	3	0	0
81 to 100 Piece Rate Workers	2	6.1	0	0
No Response	17	51.5	23	69.7
<b>Total</b>	<b>33</b>	<b>100</b>	<b>33</b>	<b>100</b>

## Annex 5: Manpower Assessment (cont)

What is the average educational level attained by production schedulers in your company?		
<i>Average Educational Level Attained by Production Schedulers</i>	f	%
Basic High School	5	15.2
College Units	5	15.2
College Graduate	11	33.3
No Response	12	36.4
Total	2	6.1
What is the average educational level attained by inventory managers in your company?		
<i>Average Educational Level Attained by Inventory Managers</i>	f	%
Basic High School	5	15.2
College Units	5	15.2
College Graduate	9	27.3
No Response	1	3
Total	13	39.4
What is the average educational level attained by warehouse supervisors in your company?		
<i>Average Educational Level Attained by Warehouse Supervisors</i>	f	%
Basic High School	5	15.2
College Units	10	30.3
College Graduate	5	15.2
Invalid Response	1	3
No Response	12	36.4
Total	33	100

## Annex 5: Manpower Assessment (cont)

What is the average educational level attained by quality controllers in your company?		
<i>Average Educational Level Attained by Quality Controllers</i>	f	%
Basic High School	9	27.3
College Units	12	36.4
College Graduate	7	21.2
Invalid Response	1	3
No Response	4	12.1
Total	33	100
What is the average educational level attained by production workers?		
<i>Average Educational Level Attained by Regular Production Workers</i>	f	%
Elementary	1	3
Basic High School	16	48.5
College Units	4	12.1
Invalid Response	2	6.1
No Response	10	30.3
Total	33	100
What is the educational level attained by daily rate contractual workers?		
<i>Average Educational Level Attained by Daily Rate Contractual Workers</i>	f	%
None	2	6.1
Basic High School	10	30.3
College Units	1	3
No Response	20	60.6
Total	33	100

## Annex 5: Manpower Assessment (cont)

Summary of Educational Attainment of Employees		
<i>Average Educational Level Attained by Employees</i>	Educational Attainment	
Production Scheduler	College Graduate	
Inventory Manager	College Graduate	
Warehouse Supervisor	College Units	
Quality Control	College Units	
Regular Production Workers	Basic High School	
Daily Rate Contractual Workers	Basic High School	
What is the average age of management employees?		
<i>Average Age of Management Employees</i>	f	%
20-30 years old	18	54.5
30-40 years old	8	24.2
40-50 years old	1	3
Invalid Response	1	3
No Response	5	15.2
Total	33	100
What is the average age of regular production workers?		
<i>Average Age of Regular Production Workers</i>	f	%
20-30 years old	20	60.6
30-40 years old	5	15.2
No Response	8	24.2
Total	33	100

## Annex 5: Manpower Assessment (cont)

What is the average length of stay in the company of management employees?		
<i>Average Length of Stay in Company of Management Employees</i>	f	%
Below 1 year	2	6.1
1-2 Years	3	9.1
2-3 Years	6	18.2
3-4 Years	5	15.2
5-10 Years	9	27.3
Above 10 Years	2	6.1
No Response	6	18.2
Total	33	100
What is the average length of stay in the company of regular production workers?		
<i>Average Length of Stay of Regular Production Workers</i>	f	%
Below 1 year	3	9.1
1 to 2 Years	5	15.2
2 to 3 Years	7	21.2
3 to 4 Years	3	9.1
5 to 10 Years	4	12.1
Above 10 Years	1	3
No Response	10	30.3
Total	33	100

## Annex 5: Manpower Assessment (cont)

What is the average daily salary (including overtime) of management employees?		
<i>Average Daily Salary Including Overtime of Management Employees</i>	f	%
Below Php 250	9	27.3
Php 250-350	17	51.5
Php 350-450	1	3
Php 450-550	1	3
Invalid Response	1	3
No Response	4	12.1
Total	33	100
What is the average salary (including overtime) of regular production workers?		
<i>Average Salary Including Overtime of Regular Production Workers</i>	f	%
Below Php 150	1	3
Php 150 to Php 180	1	3
Php 180 to Php 210	4	3
Php 210 to Php 240	6	18.2
Php 240 to Php 270	12	36.4
Invalid Response	1	3
No Response	8	24.2
Total	33	100

## Annex 5: Manpower Assessment (cont)

What is the average take-home pay per person (including overtime) of daily rate contractual workers?				
<i>Average Take Home Pay per Person Including Overtime (per day)</i>	Peak		Lean	
	f	%	f	%
Below Php 150	2	6.1	0	0
Php 150 to Php 180	1	3	0	0
Php 180 to Php 210	4	12.1	1	3
Php 210 to Php 240	3	9.1	1	3
Php 240 to Php 270	3	9.1	1	3
Not Applicable	0	0	1	3
No Response	20	60.6	29	87.9
<b>Total</b>	<b>33</b>	<b>100</b>	<b>33</b>	<b>100</b>
What is the minimum Peso per piece rate for Piece-rate contractual workers?				
<i>Minimum Peso per Piece</i>	f	%		
Php 0.15	1	3		
Php 0.5	1	3		
Php 1	4	12.1		
Php 1.5	1	3		
Php 2	3	9.1		
Php 5	3	9.1		
Php 8	1	3		
Php 10	2	6.1		
Php 15	1	3		
No Response	16	48.5		
<b>Total</b>	<b>33</b>	<b>100</b>		

## Annex 5: Manpower Assessment (cont)

What is the maximum Peso per piece rate for Piece-rate contractual workers?		
<i>Maximum Peso per Piece</i>	f	%
Php 0.25	1	3
Php 1.25	1	3
Php 10	4	12.1
Php 15	1	3
Php 16	1	3
Php 20	2	6.1
Php 25	1	3
Php 40	1	3
Php 50	2	6.1
Php 80	1	3
Php 120	1	3
No Response	17	51.5
Total	33	100
On the average, how many operation managers are late per day?		
Average Number of Late Operations Managers per Day	f	%
No Tardy Managers	10	30.3
1 to 2 Managers	10	30.3
3 to 4 Managers	1	3
5 to 6 Managers	2	6.1
7 to 8 Managers	1	3
9 to 10 Managers	1	3
More than 10 Managers	1	3
No Response	7	21.2
Total	33	100

## Annex 5: Manpower Assessment (cont)

On the average, how many regular production workers are late per day?		
Average Number of Late Production Workers per Day	f	%
No Tardy Workers	3	9.1
1 to 5 Workers	12	36.4
5.1 to 10 Workers	5	15.2
20.1 to 30 Workers	1	3
No Response	12	36.4
Total	33	100
On the average, how many minutes is a manager late?		
Average Minutes Late per Person	f	%
0 Minutes	5	15.2
Less than 10 Minutes	7	21.2
10 to 20 Minutes	10	30.3
21 to 30 Minutes	4	12.1
No Response	7	21.2
Total	33	100

## Annex 5: Manpower Assessment (cont)

On the average, how many minutes is a regular production worker late?		
Average Minutes Late per Worker	f	%
No Minutes Tardy	2	6.1
.1 to 5 Minutes	3	9.1
5.1 to 10 Minutes	5	15.2
10.1 to 15 Minutes	6	18.2
15.1 to 25 Minutes	1	3
25.1 to 35 Minutes	1	3
More than 35 Minutes	1	3
Invalid Response	2	6.1
No Response	12	36.4
Total	33	100
On the average, how many operations managers are absent per month?		
Absent Operations Manager per Month	f	%
No Absences	8	24.2
1 to 2 People	11	33.3
2.1 to 3 People	1	3
3.1 to 4 People	2	6.1
4.1 to 5 People	2	6.1
Above 5 People	2	6.1
No Response	7	21.2
Total	33	100

## Annex 5: Manpower Assessment (cont)

On the average, how many regular production workers are absent per month?		
Absent Production Worker per Month	f	%
No Absent Regular Production Workers	4	12.1
1 to 5 Absent Regular Production Workers	12	36.4
5.1 to 10 Absent Regular Production Workers	2	6.1
20.1 to 30 Absent Regular Production Workers	2	6.1
No Response	13	39.4
Total	33	100
On the average, how many days is an operations manager absent per month?		
Average Number of Days Absent per Manager per Month	f	%
No Days Absent	6	18.2
1 to 2 Absences per Day	17	51.5
2.1 to 3 Absences per Day	2	6.1
Above 3.1 Absences per Day	1	3
No Response	7	21.2
Total	33	100
On the average, how many days is a regular production worker absent per month?		
Average Number of Days Absent per Production Worker per Month	f	%
No Absences	3	9.1
.01 to 1 Day	10	30.3
1.01 to 2 Days	7	21.2
2.01 to 3 Days	1	3.0
No Response	12	36.4
Total	33	100

## Annex 6: Workers' Skills Upgrading

How long does it take for a new production worker to become skilled in production activities?		
<i>Length of Time for New Worker to Acquire Skills</i>	f	%
Less than 1 Week	15	45.5
1 to 2 Weeks	1	3
2 weeks to 1 Month	4	12.1
1 to 2 Months	2	6.1
2 to 4 Months	2	6.1
Others	3	9.1
Not Applicable	1	3
Invalid Data	1	3
No Response	4	12.1
Total	33	100

## Annex 7: Employee Evaluation

How frequent is the evaluation for management?		
<i>Frequency of Evaluation</i>	f	%
No Worker Evaluation	9	27.3
Every 3 Months	6	18.2
Every 6 Months	1	3
Every Year	7	21.1
Others	4	12.1
No Response	6	18.2
Total	33	100
How frequent is the evaluation for regular production workers?		
<i>Frequency of Evaluation</i>	f	%
No Worker Evaluation	11	33.3
Every Month	1	3
Every 3 Months	3	9.1
Every 6 Months	1	3
Every Year	6	18.2
Others	4	12.1
No Response	7	21.2
Total	33	100
How frequent is the evaluation for contractual production workers?		
<i>Frequency of Evaluation</i>	f	%
No Worker Evaluation	14	42.4
Every 3 Months	3	9.1
Every 6 Months	1	3
No Response	15	45.5
Total	33	100

## Annex 8: Facilities and Capacity Assessment

What is the size of the storage area for raw materials?		
<i>Raw Material Storage Area</i>	f	%
Less than 100 sq. m	12	36.4
100 to 250 sq. m	10	30.3
250 to 500 sq. m	5	15.2
500 to 1000 sq. m	2	6.1
Not Applicable	2	6.1
No Response	2	6.1
Total	33	100
What is the size of the storage area for finished goods?		
<i>Finished Goods Storage Area</i>	f	%
Less than 100 sq. m	14	42.4
100 to 250 sq. m	13	39.4
250 to 500 sq. m	4	12.1
No Response	2	6.1
Total	33	100
What is the size of the production area?		
<i>Production Area</i>	f	%
Less than 100 sq. m	8	24.2
100 to 250 sq. m	11	33.3
250 to 500 sq. m	4	12.1
500 to 1000 sq. m	4	12.1
Over 1500 sq. m	2	6.1
Not Applicable	1	3
No Response	3	9.1
Total	33	100

## Annex 8: Facilities and Capacity Assessment (cont)

What is the size of the finishing area?		
<i>Finishing Area</i>	f	%
Less than 100 sq. m	9	27.3
100 to 250 sq. m	11	33.3
250 to 500 sq. m	2	6.1
500 to 1000 sq. m	1	3
Over 1500 sq. m	2	6.1
Not Applicable	3	9.1
No Response	5	15.2
Total	33	100

## Annex 9: Machines and Equipment

Does your company use any machine/equipment?		
<i>Machine/Equipment Use</i>	f	%
Yes	26	78.8
No	2	6.1
No Response	5	15.2
Total	33	100
What types of machines do you have in terms of automation?		
<i>Machine Types</i>	f	%
Manually Operated Machines	25	75.8
Semi-Automated Machines	3	9.1
Automated Machines	1	3
Do machines make use of tools or parts that require changing?		
<i>Machines that make use of Parts that Need Changing</i>	f	%
Yes	6	18.2
No	3	9.1
No Response	24	72.7
Total	33	100
Is there a standard procedure whenever any breakdown occurs?		
<i>Standard Procedure in case of Breakdown</i>	f	%
Yes	15	45.5
No	10	30.3
No Response	8	24.2
Total	33	100

## Annex 9: Machines and Equipment (cont)

How often are machines inspected?		
<i>Frequency of Machine Inspection</i>	f	%
Whenever Breakdown Occurs	17	51.5
Once a Week	1	3
Once a Month	1	3
Once Every 6 Months	1	3
Once a Year	1	3
Others	3	9.1
No Response	9	27.3
Total	33	100
Who does the inspection of machines?		
Equipment Inspection Comments	f	%
Inspection Done by Worker	16	48.5
Inspection Scheduled and Performed by a Repairman	11	33.3
Equipment may be left alone for more than 2 days when awaiting repairs	1	3
What are the reasons or criteria for acquisition of new machines or equipment?		
Criteria for Machine/Equipment Acquisition	f	%
Machine/Equipment Acquired to replace Old Machine	15	45.5
Machine/Equipment Acquired to replace Old Machine	8	24.2
Machine/Equipment Acquired to Upgrade Existing Machine	13	39.4

## Annex 9: Machines and Equipment (cont)

How did the company learn about a machine's existence?		
How Company Learned About Machine's Existence	f	%
Learned Machine Exists through Broadsheet or Publication	3	9.1
Learned Machine Exists through Salesman	2	6.1
Learned Machine Exists through Internet	2	6.1
Learned Machine Exists through Visit to other Company	3	9.1
Learned Machine Exists through Endorsment by Organization	2	6.1
Learned Machine Exists through Trade Fairs and Exhibits	3	9.1
Learned Machine Exists through Other Means	0	0
Does the company make use of hand tools?		
<i>Use of Hand Tools</i>	f	%
Yes	26	78.8
No	1	3
No Response	6	18.2
Total	33	100

## Annex 10: Facility Layout

How was the company's layout developed?		
<i>How Production Layout was Developed</i>	f	%
Company's Production Layout Developed through Grouping of Similar Processes	14	42.4
Company's Production Layout Developed through Grouping of Similar Product Types	6	18.2
Company's Production Layout Dictated by Space Requirement of Processes	3	9.1
Company's Production Layout Dictated by Available Space	1	3
Company's Production Layout Planned to Ensure Continuous Flow of Materials	6	18.2
There was no Planned Layout	6	18.2
Others	2	60.1
What causes a change in the layout, if any?		
<i>Reasons for Layout Change</i>	f	%
Change in Layout Due to New Equipment	6	18.2
Change in Layout Due to New Designs	2	6.1
Change in Layout Due to More Employees	9	27.3
Change in Layout Due to Increase in Volume of Work	11	33.3
Change in Layout Due to New Process Flow	4	12.1
Change in Layout Due to Increased Space for Raw Material Inventory	1	3
Change in Layout Due to Work-in-Process	1	3
Change in Layout Due to Finished Goods Inventory	1	3
Others	6	18.2

## Annex 10: Facility Layout (cont)

How often do you change the layout?		
<i>Frequency of Layout Change</i>	f	%
Once every 6 months	3	9.1
Once a year	11	33.3
Every 2 to 3 years	4	12.1
Never	4	12.1
When Needed	1	3
Others	2	6.1
No Response	8	24.2
Total	33	100

## Annex 11: Assistance Received by the Company

What are the forms of assistance received by your company from different outside agencies?		
<i>Assistance Received from Different Outside Agencies</i>	f	%
No Assistance Received from Different Outside Agencies	12	36.4
Trade Show Participation	13	39.4
Sourcing of Machines/Equipment	2	6.1
Sourcing of Raw Materials	5	15.2
Sourcing of Manpower	2	6.1
Manufacturing Technology	2	6.1
Training in Production Management	5	15.2
Others	2	6.1

## Annex 12: Components of Production System

What type of tools or machines does your company use with respect to different operations activities?				
n=33	%= x/n	Manual Without Tools	Manual With Tools	Use of Machine
<i>Activity</i>		f	f	f
Material Handling Activity		25	3	1
Production		17	22	5
Quality Control		29	8	0
Packaging		24	6	0
What type of production system does the company follow?				
Cebu				
<i>Production System</i>		f	%	
Made to Stock		5	15.2	
Made to Order		21	63.6	
Invalid Response		1	3	
No Response		6	18.2	
Total		33	100	

## Annex 13: Material Handling Equipment

Do you have existing product/materials handling equipment?		
<i>Material Handling Equipment</i>	f	%
Yes	2	6.1
No	24	72.7
No Response	7	21.2
Total	33	100

## Annex 14: Production Control System (cont)

Do you check for available production capacity before accepting an order?		
<i>Production Capacity Check</i>	f	%
Yes	20	60.6
No	11	33.3
No Response	2	60.1
Total	33	100
Do you generate production schedule?		
<i>Generate Production Schedule</i>	f	%
Yes	28	84.8
No	3	9.1
No Response	2	6.1
Total	33	100
If yes, what are included in the company's production schedule?		
<i>Components of Company's Production Schedule</i>	f	%
Type of Product / Orders to Produce	20	60.6
Quantity to Produce	22	66.7
Time to Produce	22	66.7
Assignment of Workers	10	30.3
Assignment of Machines	9	27.3
Raw Material Requirements	14	42.4
Others	0	0

## Annex 14: Production Control System (cont)

How are orders scheduled?		
<i>How Orders are Scheduled</i>	f	%
First Come First Serve	23	69.7
Rush Orders First	1	3
Customer Preferences	3	9.1
Earliest Due Date	1	3
Last In First Out	0	0
Others	12	36.4
How is work assigned to a worker?		
<i>Summary of Basis for Work Assignment</i>	f	%
Based on Skill	21	63.64
Based on Workload	3	9.09
Both	7	21.21
No Response	2	6.06
Total	33	100
How often is a production schedule generated?		
<i>Frequency of Production Schedule Generation</i>	f	%
Daily	11	33.3
Weekly	4	12.1
Monthly	5	15.2
Every Order	11	33.3
No Response	2	6.1
Total	33	100

## Annex 14: Production Control System (cont)

What are the common reasons for a change in production schedule?		
<i>Reasons for Change in Production Schedule</i>	f	%
Unavailable Worker / Absenteeism	5	15.2
FG / WIP Inventory	1	3
Defects/Rework	7	21.2
Unavailability of Raw Materials	16	48.5
Low Quality of Raw Materials	3	9.1
Machine Breakdown	4	12.1
Utilities		
Sudden Change in Order	4	12.1
Change in Customer Requirement	2	6.1
Others		
How long on the average does it take to finish the production of an order?		
<i>Production Time Finished</i>	f	%
1 to 3 Weeks	1	3
3.1 to 6 Weeks	18	54.5
6.1 to 9 Weeks	6	18.2
9.1 to 12 Weeks	3	9.1
Invalid Response	2	6.1
No Response	3	9.1
Total	33	100

## Annex 14: Production Control System (cont)

What percentage of the time is finished goods delivered beyond the due date? (0-100%)		
<i>Percent of Time Goods Delivered Beyond Due Date</i>	f	%
No Delayed Delivery	3	9.1
Less than 10%	6	18.2
10% to 20%	5	15.2
30.1% to 50%	1	3.1
70.1% to 99%	3	9.1
100%	13	39.4
No Response	2	6.1
Total	33	100
How long on the average are delivery dates exceeded?		
<i>Length Delivery Dates Exceeded</i>	f	%
No Delays	2	6.1
1 Week	13	39.4
2 Weeks	6	18.2
Others	6	18.2
Invalid Response	4	12.1
No Response	2	6.1
Total	33	100
What are the reasons for late delivery of finished goods?		
<i>Reasons for Late Delivery</i>	f	%
Unavailable Raw Materials	14	42.4
Defective Raw Materials	2	6.1
Rejects	6	18.2
Rework	5	15.2
Shipping Problem	8	24.2
Others	10	30.3

## Annex 15: New Production Methods / Technology

When was the last time new production methods / technology were implemented?		
<i>Last time new production methods/technology was implemented</i>	Frequency	Percentage
Never	13	39.4
Less than 1 year ago	13	39.4
1 - 3 years ago	4	12.1
No Response	3	9.1
Total	33	100
If improvements were done, what were they?		
<i>Improvements done</i>	Frequency	Percentage
New Tool	2	6.1
New Machine / Equipment	8	24.2
New Process	8	24.2
New Materials	5	15.2
New Layout	6	18.2
New Design (Product / Package)	5	15.2
New Schedule	2	6.1
New Inspection Scheme	0	0
Others	3	9.1
From where did you learn about the new production techniques?		
<i>Where techniques were learned</i>	Frequency	Percentage
New Tool	2	6.1
New Machine / Equipment	8	24.2
New Process	8	24.2
New Materials	5	15.2
New Layout	6	18.2
New Design (Product / Package)	5	15.2
New Schedule	2	6.1
New Inspection Scheme	0	0
Others	3	9.1

## Annex 16: Product Engineering and Development

How often are new products/designs or redesigns created?		
<i>Frequency of New Products / Design Creation</i>	f	%
Every Week	10	30.3
Every Month	2	6.1
Every 3 Months	1	3
Every 6 Months	7	21.2
Every Year	1	3
Others	12	36.4
Total	33	100
How many new products or new designs are made in a year, on the average?		
<i>Number of New Products / Design Creation</i>	f	%
10 - 20 Designs	2	6.1
30 - 50 Designs	1	3
75 - 100 Designs	7	21.2
Others	23	69.7
Total	33	100
How many designers or product developers are there in the company?		
<i>Number of Product Developers / Designers in the Company</i>	f	%
Days to Make Prototype or Sample	2	6.1
1 to 2 Designers	16	48.5
3 to 4 Designers	9	27.3
5 to 6 Designers	3	9.1
More than 8 Designers	2	6.1
No Response	1	3
Total	33	100

## Annex 16: Product Engineering and Development (cont)

How many sample-makers or prototype-makers are there in the company?		
<i>Number of Sample-makers or Prototype-makers in the Company</i>	f	%
Less than 5 Prototype Makers	14	42.4
5 to 10 Prototype Makers	12	36.4
11 to 25 Prototype Makers	4	12.1
26 to 40 Prototype Makers	1	3
Not Applicable	1	3
No Response	1	3
Total	33	100
How long on the average does it take to make the prototype or sample product?		
<i>Days to Make Prototype or Sample</i>	f	%
Less than 5 Days	20	60.6
5 to 10 Days	9	27.3
20.1 to 30 Days	2	6.1
No Response	2	6.1
Total	33	100
Who is the source of design concepts?		
<i>Source of Design Concept</i>	f	%
Company Design	9	27.3
Customer Design	1	3
Both Company and Customer	19	57.6
Consultant	3	9.1
Others	2	6.1

## Annex 16: Product Engineering and Development (cont)

If the company is the source of design concept, where does the company get ideas for the design concepts?		
<i>Source of Ideas for Internally- Produced Design Concepts</i>	f	%
Buyers	17	51.5
Trade Fairs	15	45.5
Publications	17	51.5
Researches	9	27.3
Local Designers	4	12.1
Foreign Designers	6	18.2
Internet	10	30.3
Others	4	12.1
Do you have a design lab and development facilities?		
<i>Design Lab / Development Facilities</i>	f	%
Yes	19	57.6
No	13	39.4
No Response	1	3.03
Total	33	100
How long on the average is the total time of design conceptualization stage of a new product to the manufacturing phase to the delivery of the product to the customer?		
<i>Total Time of Design Conceptualization</i>	f	%
Less than 1 month	13	39.4
1 month to 3 months	13	39.4
3 months to 6 months	2	6.1
6 months to 9 months	1	3
9 months to 1 year	1	3
No Response	3	9.1
Total	33	100

## Annex 17: Packaging

Do existing products have packaging?		
<i>Packaging for Existing Products</i>	f	%
Yes	29	87.9
No	2	6.1
No Response	2	6.1
Total	33	100
Are packaged products well-kept and preserved before delivery?		
<i>Packaged Products Well-Kept and Preserved Before Delivery</i>	f	%
Yes	29	87.9
No	2	6.1
No Response	2	6.1
Total	33	100
Are new packaging being developed regularly?		
<i>New Packaging Developed Regularly</i>	f	%
Yes	14	42.4
No	15	45.5
No Response	4	12.1
Total	33	100
If yes, what are the sources of information for new packaging concepts and ideas?		
<i>Source of New Packaging Ideas</i>	f	%
Buyers	16	48.5
Publications	0	0
Internet	0	0
Trade Fairs	2	6.1
In-House Researches	1	3
Designers	2	6.1
Others	0	0

## Annex 17: Packaging (cont)

Do you package products based on buyers' specification?		
<i>Products Packaged Based on Buyer's Specification</i>	f	%
Yes	27	81.8
No	4	12.1
No Response	2	6.1
Total	33	100
Who makes the packaging material for the products?		
<i>Source of Packaging Material</i>	f	%
Company	16	48.48
Packaging Material Supplier	12	36.36
Customer	2	6.06
No Response	3	9.09
Total	33	100

## Annex 18: Production Standards Development

Does the company have standards for production processes?		
<i>Standards for Production Processes</i>	f	%
Yes	28	84.8
No	3	9.1
No Response	2	6.1
Total	33	100
If yes, what is the basis of the process standards?		
<i>Basis of Process Standards</i>	f	%
Company Set Standards	25	75.8
Industry Practice	3	9.1
International Set Standards	1	3
Customer Specification	8	24.2
No Response	5	15.15
Does the company have standards for products and quality? (Ex: acceptable reject rate, acceptable quality, characteristics)		
<i>Standards for Products and Quality</i>	f	%
Yes	29	87.9
No	2	6.1
No Response	2	6.1
Total	33	100
If yes, what is the basis of the product and quality standards?		
<i>Basis of Product and Quality Standards</i>	f	%
Company Standards	23	69.7
Industry Practice	4	12.1
International Standards	2	6.1
Customer Specification	13	39.4
No Response	5	15.15

## Annex 19: Quality Control

Has the company been granted/awarded any quality certifications?		
<i>Quality Certifications</i>	f	%
Yes	6	18.2
No	25	75.8
No Response	2	6.1
Total	33	100
If yes, which certifications have been granted to the company?		
<i>Certifications Awarded</i>	f	%
Philippine Quality Award for Mastery in Quality Management	0	0
Philippine Quality Award for Proficiency in Quality Management	0	0
Philippine Quality Award for Commitment to Quality Management	0	0
Philippine Quality Award for Performance Excellence	0	0
Golden Shell Award (DTI)	1	3
ISO 9000 Quality Management	0	0
ISO 14001 Environmental Management System	0	0
Best in Quality Award	0	0
Compliance with Buying Agents	0	0
Compliance with Buyers Requirement	0	0
Others	6	18.2
Does the company intend to apply for any quality certifications in the next five years?		
<i>Application for Quality Certifications</i>	f	%
Yes	9	27.3
No	21	63.6
No Response	3	9.1
Total	33	100

## Annex 19: Quality Control (cont)

If yes, which of the quality certifications does the company intend to apply for?		
<i>Intended Certifications</i>	f	%
Philippine Quality Award for Mastery in Quality Management	0	0
Philippine Quality Award for Proficiency in Quality Management	0	0
Philippine Quality Award for Commitment to Quality Management	0	0
Philippine Quality Award for Performance Excellence	1	3
Golden Shell Award (DTI)	2	6.1
ISO 9000 Quality Management	5	15.2
ISO 14001 Environmental Management System	4	12.1
Others	1	3
What kinds of quality control methods does the company apply?		
<i>Quality Control System</i>	f	%
Have Testing Equipment for Quality Checking	11	33.3
Have Assigned Personnel for Quality Checking	16	48.5
Have Standard Procedures of Quality Checking	12	36.4
Have Clear Customer Specifications of Quality	11	33.3
Physical Testing	17	51.5
Chemical Testing	6	18.2

## Annex 19: Quality Control (cont)

Where are the defects found most of the time?		
<i>Where Defects are Found Most of the Time</i>	f	%
Defects Found due to Design	3	9.1
Raw Materials/Supplies	13	39.4
Within Production Process (Material/Machine breaks during Production)	18	54.5
Final Inspection by Manager (Before Delivery)	9	27.3
Customer Complains (After Delivery)	6	18.2
Others	0	0
What percentage of production becomes rejects before final processing?		
<i>Rejects before Final Processing</i>	f	%
0	3	9.1
Less than 5%	16	48.5
5% to 10%	7	21.2
11% to 20%	2	6.1
More than 20%	2	6.1
No Response	3	9.1
Total	33	100

### Annex19: Quality Control (cont)

What percentage of finished products is rejected after inspection?		
<i>Finished Products Rejected</i>	f	%
0	3	9.1
Less than 5%	19	57.6
5% to 10%	6	18.2
11% to 20%	2	6.1
No Response	3	9.1
Total	33	100
What percentage of finished products is returned by customers?		
<i>Percentage of Delivered Products returned by Customer</i>	f	%
0	19	57.6
Less than 5%	7	21.2
5% to 10%	1	3
No Response	6	18.2
Total	33	100
<i>Summary of Raw Materials and Products Discarded, Rejected, or Returned</i>	<i>Percentage</i>	
Raw Materials Discarded	8.97%	
Rejects before final processing	5.1%	
Finished Products Rejected	3.9%	
Percentage of Delivered Products returned by Customer	0	
<i>Summary of Yield</i>	83.02%	

## Annex 20: Manufacturing Costs

What is the percentage of cost component to estimated total annual production cost?	
<i>Cost Component</i>	<i>%</i>
Raw Materials	51
Labor	21.96
Administrative	12.35
Supplies	3.7
Machine/Equipment Maintenance	2.14
Overhead	6.67
Research and Development	2.19
Other	0
Total	100

## Annex 21: Cost Reduction in Shops

Are there cost reduction measures or procedures?		
<i>Cost Reduction Measures or Procedures</i>	f	%
Yes	25	75.8
No	6	18.2
No Response	2	6.1
Total	33	100
Who is responsible for cost reduction measures in shops?		
<i>Responsible for Cost Reduction Measures</i>	f	%
Owner	11	33.3
Manager/Supervisor	15	45.5
Others	2	6.06
No Response	6	18.18
Does the plant measure product waste?		
<i>Measurement of Product Waste</i>	f	%
Yes	16	48.5
No	14	42.4
No Response	3	9.1
Total	33	100

### Annex 21: Cost Reduction in Shops (cont)

What is the ranking of raw materials in terms of priority in cost reduction?		
<i>Raw Materials as Priority in Cost Reduction</i>	f	%
Extreme High Priority (1)	10	30.3
Very High Priority (2)	7	21.2
High Priority (3)	1	3
Somewhat High Priority (4)	4	12.1
Somewhat Low Priority (5)	2	6.1
Low Priority (6)	2	6.1
Very Low Priority (7)	0	0
Extremely Low Priority (8)	1	3
No Response	6	18.2
Total	33	100
What is the ranking of labor cost in terms of priority in cost reduction?		
<i>Labor as Priority in Cost Reduction</i>	f	%
Extreme High Priority (1)	3	9.1
Very High Priority (2)	7	21.2
High Priority (3)	8	24.2
Somewhat High Priority (4)	4	12.1
Somewhat Low Priority (5)	1	3
Low Priority (6)	1	3
Extremely Low Priority (8)	3	9.1
No Response	6	18.2
Total	33	100

## Annex 21: Cost Reduction in Shops (cont)

What is the ranking of overhead in terms of priority in cost reduction?		
<i>Overhead as Priority in Cost Reduction</i>	f	%
Extreme High Priority (1)	9	27.3
Very High Priority (2)	4	12.1
High Priority (3)	7	21.2
Somewhat High Priority (4)	4	12.1
Very Low Priority (5)	2	6.1
Invalid Response	1	3.0
No Response	6	18.2
Total	33	100
What is the ranking of waste in terms of priority in cost reduction?		
<i>Waste as Priority in Cost Reduction</i>	f	%
Extreme High Priority (1)	3	9.1
Very High Priority (2)	6	18.2
High Priority (3)	4	12.1
Somewhat High Priority (4)	2	6.1
Extremely Low Priority (8)	11	33.3
No Response	7	21.2
Total	33	100

## Annex 21: Cost Reduction in Shops (cont)

What is the ranking of warehousing in terms of priority in cost reduction?		
<i>Warehousing as Priority in Cost Reduction</i>	f	%
Very High Priority (2)	2	6.1
High Priority (3)	3	9.1
Somewhat High Priority (4)	9	27.3
Somewhat Low Priority (5)	6	18.2
Low Priority (6)	3	9.1
Very Low Priority (7)	3	9.1
Extremely Low Priority (8)	1	3
No Response	6	18.2
Total	33	100
What is the ranking of delivery in terms of priority in cost reduction?		
<i>Delivery as Priority in Cost Reduction</i>	f	%
High Priority (3)	2	6.1
Somewhat High Priority (4)	2	6.1
Somewhat Low Priority (5)	5	15.2
Low Priority (6)	11	33.3
Very Low Priority (7)	5	15.2
Extremely Low Priority (8)	1	3
Invalid Response	1	3
No Response	6	18.2
Total	33	100

## Annex 21: Cost Reduction in Shops (cont)

What is the ranking of marketing in terms of priority in cost reduction?		
<i>Marketing as Priority in Cost Reduction</i>	f	%
High Priority (3)	1	3
Somewhat High Priority (4)	3	9.1
Somewhat Low Priority (5)	4	12.1
Low Priority (6)	8	24.2
Very Low Priority (7)	7	21.2
Extremely Low Priority (8)	2	6.1
Invalid Response	2	6.1
No Response	6	18.2
Total	33	100
What is the ranking of research and development in terms of priority in cost reduction?		
<i>Research and Development as Priority in Cost Reduction</i>	f	%
Somewhat Low Priority (5)	7	21.2
Low Priority (6)	5	15.2
Very Low Priority (7)	8	24.2
Extremely Low Priority (8)	5	15.2
Invalid Response	2	6.1
No Response	6	18.2
Total	33	100

### Annex 21: Cost Reduction in Shops (cont)

Summary of Cost Reduction in Shops				
Cost Component (as Priority in Cost)	Rank	f	%	Ranking
Raw Materials	Extreme High Priority	10	30.3	1
Labor	High Priority	8	24.2	2
Overhead	Extreme High Priority	9	27.3	1
Waste	Extreme Low Priority	11	33	6
Warehousing	Somewhat High Priority	9	27.3	3
Delivery	Low Priority	11	33	4
Marketing	Low Priority	8	24.2	4
Research and Development	Very Low Priority	8	24.2	5

## Annex 22: Raw Materials Sourcing

How do you source most of your raw materials?		
<i>How Most Raw Materials are Sourced</i>	f	%
Direct From Supplier	21	63.6
Through Middleman	3	9.1
Both Supplier and Middleman	6	18.2
No Response	3	
Is there a raw materials inspection procedure?		
<i>Inspection Procedure</i>	f	%
Yes	27	81.8
No	3	9.1
No Response	3	9.1
Total	33	100
Where do you get more than 2/3 of your raw materials?		
<i>Where Most Raw Materials are Sourced</i>	f	%
Own Supply	32	96.7
From Local Market	28	84.8
Imported	5	15.2
How long on the average is the delivery period for raw materials sourced from the local market?		
<i>Average Delivery Period</i>	f	%
Less than 1 Week	14	42.4
1 -2 Weeks	7	21.2
2 - 4 Weeks	6	18.2
Others	1	3
Not Applicable	1	3
No Response	4	12.1
Total	33	100

## Annex 22: Raw Materials Sourcing (cont)

How long on the average is the delivery period for imported raw materials?		
<i>Average Delivery Period</i>	f	%
No Imported RM	4	12.1
Less than 1 Week	4	12.1
1 -2 Weeks	4	12.1
2 - 4 Weeks	7	21.2
4 - 6 Weeks	3	9.1
Not Applicable	1	3
No Response	10	30.3
Total	33	100
In what form do the company's raw materials come?		
<i>Form of Raw Materials</i>	Percentage	
Unprocessed Raw Materials	24	
Semi-Processed Raw Materials	22	
Processed Raw Materials	54	
Total	100	

### Annex 23: Raw Materials Delivery

Do raw materials generally arrive on time?		
<i>Raw Materials Arrive on Time</i>	f	%
Never on Time	2	6.1
Seldom on Time	16	48.5
Mostly on Time	11	33.3
Always on Time	1	3
We Pick up Our Raw Materials Ourselves	1	3
No Response	2	6.1
Total	33	100
Which raw materials are often delivered late?		
<i>Late Raw Material Deliveries</i>	f	%
Locally Sourced Raw Materials Delivered Late	23	69.7
Directly Imported Raw Materials Delivered Late	6	18.2
Imported Raw Materials from Local Traders Delivered Late	2	6.1

## Annex 24: Raw Materials Inventory Control

Do you monitor usage of raw materials?		
<i>Monitor Usage of Raw Materials</i>	f	%
Yes	29	87.9
No	2	6.1
No Response	2	6.1
Total	33	100
Do you keep track of current inventory level?		
<i>Current Inventory Level</i>	f	%
Yes	29	87.9
No	1	3
No Response	3	9.1
Total	33	100
How long on the average do your raw materials stay in the warehouse?		
<i>Raw Materials Length of Stay in Warehouse</i>	f	%
Less than 1 week	6	18.2
1 to 2 weeks	5	15.2
2 to 3 weeks	3	9.1
3 to 4 weeks	4	12.1
4 to 6 weeks	2	6.1
6 to 8 weeks	1	3
8 to 10 weeks	2	6.1
More than 10 weeks	4	12.1
Not Applicable	1	3
Invalid Response	2	6.1
No Response	3	9.1
Total	33	100

### Annex 24: Raw Materials Inventory Control (cont)

What problems does the company encounter in raw material storage?		
<i>Problems Encountered in Raw Materials Storage</i>	f	%
Spoilage/Rotten	7	21.2
Dusty	7	21.2
Theft/Stolen	6	18.2
Damaged Due to Mishandling	8	24.2
Damaged Due to Pests	4	12.1
Always in Good Condition	9	27.3
Others	0	0

## Annex 25: Common Problems with Raw Materials

How common is the problem in quality of raw materials?		
<i>Quality Problem (Rank)</i>	f	%
Most Common Problem (1)	6	18.2
More Common Problem (2)	7	21.2
Somewhat Common Problem (3)	8	24.2
Lesser Common Problem (4)	6	18.2
Invalid Response	3	9.1
No Response	3	9.1
Total	33	100
How common is the problem in availability of raw materials?		
<i>Availability Problem</i>	f	%
Most Common Problem	15	46.9
More Common Problem	8	25
Somewhat Common Problem	4	12.5
Lesser Common Problem	3	9.4
No Response	2	6.3
Total	33	100
How common is the problem of delivery of raw materials?		
<i>Delivery Problem</i>	f	%
Most Common Problem	5	15.2
More Common Problem	8	24.2
Somewhat Common Problem	10	30.3
Lesser Common Problem	6	18.2
Invalid Response	1	3
No Response	3	9.1
Total	33	100

### Annex 25: Common Problems with Raw Materials (cont)

How common is the problem of price of raw materials?		
<i>Price Problem</i>	f	%
Most Common Problem	3	9.4
More Common Problem	5	15.6
Somewhat Common Problem	5	15.6
Lesser Common Problem	14	43.8
Least Common Problem	1	3.1
Invalid Response	2	6.3
No Response	2	6.3
Total	33	100
How common are other problems with raw materials?		
<i>Other Problems</i>	f	%
Lesser Common Problem	2	6.1
Least Common Problem	9	27.3
No Response	22	66.7
Total	33	100
Summary of Common Problems with Raw Materials		
Common Problem	Rank	
Quality Problems	Somewhat Common Problem (2)	
Availability Problems	Most Common Problem (1)	
Delivery Problems	Somewhat Common Problem (2)	
Price Problems	Lesser Common Problem (3)	

## Annex 26: Subcontractors

Do you subcontract work?		
<i>Subcontract Work</i>	f	%
Yes	31	94
No	1	3
No Response	1	3
Total	33	100
What is the total number of the company's subcontractors?		
<i>Number of Subcontractors</i>	f	%
1 to 5	7	21.2
6 to 10	5	15.2
11 to 20	5	15.2
21 to 30	4	12.1
31 to 50	4	12.1
51 to 100	2	6.1
More than 100	2	6.1
No Response	4	12.1
Total	33	100
What is the basis for choosing subcontractors?		
<i>Basis for Choosing Subcontractors</i>	f	%
Bidding Process	7	21.2
Quality Basis	5	15.2
Capacity Basis	5	15.2
Location	4	12.1
Others	4	12.1

## Annex 26: Subcontractors (cont)

Are raw materials supplied to subcontractors?		
<i>Raw Material Supplied</i>	f	%
All Raw Materials	14	42.4
All Major Raw Materials Only	2	6.1
Some Major Raw Materials Only	7	21.2
No Raw Materials Supplied to Subcontractors	3	9.1
Some Major and Minor Raw Materials	2	6.1
Others	1	3
No Response	4	12.1
Total	33	100
How does the company maintain the quality of subcontractor-made products?		
<i>How Product Quality from Subcontractors is Maintained</i>	f	%
Do Nothing	5	15.2
Assessment of Subcontractor Production Process	13	39.4
Screening Suppliers of Subcontractor	4	12.1
Providing Training to its Workers	2	6.1
Plant Visit to Subcontractor and Factory Assessment	11	33.3
Raw Materials Quality Inspection / Assessment	3	9.1
Raw Material Sourcing for Subcontractor	2	6.1
Others	4	12.1

## Annex 27: Waste Management

What types of waste does the manufacturing process generates?		
<i>Types of Waste Generated</i>	f	%
Waste Water	6	18.2
Animal Byproducts	0	0
Plant Byproducts	0	0
Oil	3	9.1
Chemicals	7	21.2
Paper	8	24.2
Smoke	1	3
Steam	0	0
Metals	3	9.1
Others	11	33.3
How are wastes generated?		
<i>Source of Waste</i>	f	%
From Raw Material Excess	15	45.5
From Process	16	48.5
From Work-in-Process Rejects	6	18.2
Finished Goods Rejects	7	21.2
What percentage of total raw material input becomes waste?		
<i>Percent Output to Waste</i>	f	%
Less than 5%	17	51.5
5 to 10%	6	18.2
10 to 20%	3	9.1
20 to 35%	1	3
No Response	6	18.2
Total	33	100

### Annex 27: Waste Management (cont)

How does the company deal with the generated waste?		
<i>How Waste is Addressed</i>	f	%
Reprocess	6	18.2
Reuse	10	30.3
Sell Waste Products	5	15.2
Incinerate	0	0
Treatment	1	3
Compost	0	0
Dispose	16	48.5
Others	0	0

## Annex 28: Pearl2 Project Company Survey Form

<b>Pearl2 Project Company Survey Form</b>	<b>Form Control No.</b> _____
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In line with Pearl2 Project, this survey questionnaire aims to determine the manufacturing conditions of Small and Medium Enterprises and the current practices for assessment purposes. Please fill out the survey completely and accurately. Your cooperation will greatly contribute to the success of this study and the industry.

<b>Major Product Line</b>	
What is the main business of the company? (Check below the main business/es AND indicate the percent contribution of each to the company revenue.)	
Business of the Company	Percentage to Revenue
<input type="checkbox"/> Costume Jewelry	_____ %
<input type="checkbox"/> Fine Jewelry	_____ %
<input type="checkbox"/> Housewares	_____ %
<input type="checkbox"/> Furniture	_____ %
<input type="checkbox"/> Holiday Decors	_____ %
<input type="checkbox"/> Processed Mango	_____ %
<input type="checkbox"/> Footwear	_____ %
<input type="checkbox"/> Leathergoods	_____ %
<b>Total Product Sales Percentage</b>	
Export Sales = _____ %	Local Sales = _____ %

<b>What is the item most often produced by the company? Please describe.</b>
<b>NOTE:</b> For the succeeding parts of survey questionnaire, base your answers ONLY on this item.

<b>Working Schedule</b>	
Which of the following holidays does the company observe? (No work on these days)	
<input type="checkbox"/> New Year's Day (Jan 1)	<input type="checkbox"/> All Souls' Day (Nov 2)
<input type="checkbox"/> EDSA Revolution (Feb 25)	<input type="checkbox"/> Ramadan (Nov 15)
<input type="checkbox"/> Holy Week (Thursday to Sunday)	<input type="checkbox"/> Bonifacio Day (Nov 30)
<input type="checkbox"/> Araw ng Kagitingan (Apr 9)	<input type="checkbox"/> Christmas (Dec 25)
<input type="checkbox"/> Labor Day (May 1)	<input type="checkbox"/> December 26
<input type="checkbox"/> Town Fiesta	<input type="checkbox"/> December 27, 28 and 29
<input type="checkbox"/> City Day	<input type="checkbox"/> Rizal Day (Dec 30)
<input type="checkbox"/> Independence Day (Jun 12)	<input type="checkbox"/> New Year's Eve (Dec 31)
<input type="checkbox"/> Ninoy Aquino Day (Aug 21)	<input type="checkbox"/> Company Anniversary
<input type="checkbox"/> All Saints Day (Nov 1)	<input type="checkbox"/> Others (specify) _____

## Annex 28: Pearl2 Project Company Survey Form (cont)

How long are total merienda breaks per shift? (for daily workers)	<input type="checkbox"/> 15 minutes per shift	<input type="checkbox"/> 60 minutes per shift
Are workers paid during these breaks? (for daily workers)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
How long are total merienda breaks per shift? (for piece rate workers)	<input type="checkbox"/> 15 minutes per shift	<input type="checkbox"/> 60 minutes per shift
Are workers paid during these breaks? (for piece rate workers)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Does production cycle have peak and lean seasons? <input type="checkbox"/> Yes <input type="checkbox"/> No		
If yes, please check the peak and lean months below. If no, skip to the next page.		

<b>Please Check all the Peak Months of Production</b>		
<input type="checkbox"/> January	<input type="checkbox"/> May	<input type="checkbox"/> September
<input type="checkbox"/> February	<input type="checkbox"/> June	<input type="checkbox"/> October
<input type="checkbox"/> March	<input type="checkbox"/> July	<input type="checkbox"/> November
<input type="checkbox"/> April	<input type="checkbox"/> August	<input type="checkbox"/> December
<b>Please Check all the Lean Months of Production</b>		
<input type="checkbox"/> January	<input type="checkbox"/> May	<input type="checkbox"/> September
<input type="checkbox"/> February	<input type="checkbox"/> June	<input type="checkbox"/> October
<input type="checkbox"/> March	<input type="checkbox"/> July	<input type="checkbox"/> November
<input type="checkbox"/> April	<input type="checkbox"/> August	<input type="checkbox"/> December

**NOTE:** If production is uniform throughout the year, simply fill out the "For Peak Months" work schedule below to represent the average work schedule condition.

<b>For Peak Months</b>		
Average Number of Working Days per Week	<input type="checkbox"/> 5 days per week	<input type="checkbox"/> 5 and a half days per week
	<input type="checkbox"/> 6 days per week	<input type="checkbox"/> 6 and a half days per week
	<input type="checkbox"/> 7 days per week	<input type="checkbox"/> Others (specify): _____ days per week
Average Total Regular Working Hours in a Day (including all shifts)	<input type="checkbox"/> 8 hours	<input type="checkbox"/> 24 hours
	<input type="checkbox"/> 12 hours	<input type="checkbox"/> Others (specify): _____ hours
	<input type="checkbox"/> 16 hours	
Average Total Overtime Hours in a Day (time in excess of regular working hours)	<input type="checkbox"/> No overtime	<input type="checkbox"/> 3 hours
	<input type="checkbox"/> 1 hour	<input type="checkbox"/> 4 hours
	<input type="checkbox"/> 2 hours	<input type="checkbox"/> Others (specify): _____ hours
Number of Shifts in a Day	<input type="checkbox"/> 1 Shift per day	<input type="checkbox"/> 2 Shifts per day

<b>For Lean Months (Please do not fill this up if you do not have peak months of production)</b>		
Average Number of Working Days per Week	<input type="checkbox"/> 4 days per week	<input type="checkbox"/> 4 and a half days per week
	<input type="checkbox"/> 5 days per week	<input type="checkbox"/> 5 and a half days per week
	<input type="checkbox"/> 6 days per week	<input type="checkbox"/> Others (specify): _____ days per week
Average Total Regular Working Hours in a Day (including all shifts)	<input type="checkbox"/> 8 hours	<input type="checkbox"/> 24 hours
	<input type="checkbox"/> 12 hours	<input type="checkbox"/> Others (specify): _____ hours
	<input type="checkbox"/> 16 hours	
Average Total Overtime Hours in a Day (time in excess of regular working hours)	<input type="checkbox"/> No overtime	<input type="checkbox"/> 3 hours
	<input type="checkbox"/> 1 hour	<input type="checkbox"/> 4 hours
	<input type="checkbox"/> 2 hours	<input type="checkbox"/> Others (specify): _____ hours
Number of Shifts in a Day	<input type="checkbox"/> 1 Shift per day	<input type="checkbox"/> 2 Shifts per day

## Annex 28: Pearl2 Project Company Survey Form (cont)

<b>Production Requirement and Production Capacity</b>					
<b>Peak Season</b>			<b>Lean Season</b>		
Smallest Order Qty per Month	Biggest Order Qty per Month	Average Production Qty per Month	Smallest Order Qty per Month	Biggest Order Qty per Month	Average Production Qty per Month
_____	_____	_____	_____	_____	_____
Units/Month	Units/Month	Units/Month	Units/Month	Units/Month	Units/Month

<b>Working Conditions</b>	
Average Occurrences of Accidents/Injury Cases in a Year	
<input type="checkbox"/> Never Had Accidents/Injuries	<input type="checkbox"/> 15 – 20 Times/Year
<input type="checkbox"/> 1 – 5 Times/Year	<input type="checkbox"/> 20 – 30 Times/Year
<input type="checkbox"/> 5 – 10 Times/Year	<input type="checkbox"/> More Than 30 Times/Year
<input type="checkbox"/> 10 – 15 Times/Year	<input type="checkbox"/> Others (specify) _____
Check which of the following benefits do the company's workers receive?	
<input type="checkbox"/> SSS (Social Security System) Benefits	<input type="checkbox"/> Medical Benefits/Insurance
<input type="checkbox"/> 13 <sup>th</sup> Month Pay	<input type="checkbox"/> Vacation Leave
<input type="checkbox"/> Bonus / Incentives	<input type="checkbox"/> Sick Leave
<input type="checkbox"/> Pag-Ibig	<input type="checkbox"/> Birthday Leave
<input type="checkbox"/> Uniform	<input type="checkbox"/> Sports and Recreation
<input type="checkbox"/> Meals	<input type="checkbox"/> Others (specify) _____
<input type="checkbox"/> Profit Sharing	

## Annex 28: Pearl2 Project Company Survey Form (cont)

<b>Manpower Assessment</b>							
<b>Management</b> (Please <b>check</b> if company has the following personnel)	# of Male	# of Female	Average Educational Level Attained by Operations Management Employees		Average Age	Average Length of Stay in Company	Average Salary Including Overtime (Pesos/Day)
<input type="checkbox"/> Production Scheduler			<input type="checkbox"/> Elementary, Basic <input type="checkbox"/> High School	<input type="checkbox"/> College Units <input type="checkbox"/> College Graduate	<input type="checkbox"/> Below 20	<input type="checkbox"/> Below 1yr	<input type="checkbox"/> Below 250
<input type="checkbox"/> Inventory Manager			<input type="checkbox"/> Elementary, Basic <input type="checkbox"/> High School	<input type="checkbox"/> College Units <input type="checkbox"/> College Graduate	<input type="checkbox"/> 20 - 30	<input type="checkbox"/> 1 - 2 yrs	<input type="checkbox"/> 250 - 350
<input type="checkbox"/> Warehouse Supervisor			<input type="checkbox"/> Elementary, Basic <input type="checkbox"/> High School	<input type="checkbox"/> College Units <input type="checkbox"/> College Graduate	<input type="checkbox"/> 30 - 40	<input type="checkbox"/> 2 - 3 yrs	<input type="checkbox"/> 350 - 450
<input type="checkbox"/> Quality Control			<input type="checkbox"/> Elementary, Basic <input type="checkbox"/> High School	<input type="checkbox"/> College Units <input type="checkbox"/> College Graduate	<input type="checkbox"/> 40 - 50	<input type="checkbox"/> 3 - 4 yrs	<input type="checkbox"/> 450 - 550
					<input type="checkbox"/> 50 - 60	<input type="checkbox"/> 5 - 10 yrs	<input type="checkbox"/> 550 - 650
					<input type="checkbox"/> Above 60	<input type="checkbox"/> Above 10	<input type="checkbox"/> 650 - 750
<b>Absenteeism (Management)</b>							
Average Number of Persons LATE per DAY			_____ Late Operations Management Persons / Day				
Average Minutes LATE Per Person			_____ Minutes Late per Person				
Average Number of Person ABSENT per Month			_____ Absent Operations Management Persons / Month				
Average Number of Days ABSENT per PERSON per Month			_____ Days Absent / Person / Month				

Do you have <b>regular production workers</b> ? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, please fill out this table. If no, skip to the next table.						
<b>Production Workers (Daily)</b>	# of Male	# of Female	Average Age	Average Length of Stay in Company	Average Salary Including Overtime (Pesos/Day)	Average Educational Level Attained by Regular Production Workers
Production Workers			<input type="checkbox"/> Below 20 <input type="checkbox"/> 20 - 30 <input type="checkbox"/> 30 - 40 <input type="checkbox"/> 40 - 50 <input type="checkbox"/> 50 - 60 <input type="checkbox"/> Above 60	<input type="checkbox"/> Below 1 yr <input type="checkbox"/> 1 - 2 yrs <input type="checkbox"/> 2 - 3 yrs <input type="checkbox"/> 3 - 4 yrs <input type="checkbox"/> 5 - 10 yrs <input type="checkbox"/> Above 10	<input type="checkbox"/> Below 150 <input type="checkbox"/> 270-300 <input type="checkbox"/> 150 - 180 <input type="checkbox"/> 300-330 <input type="checkbox"/> 180 - 210 <input type="checkbox"/> 330-360 <input type="checkbox"/> 210 - 240 <input type="checkbox"/> 360-390 <input type="checkbox"/> 240 - 270 <input type="checkbox"/> Above 390	<input type="checkbox"/> None <input type="checkbox"/> Elementary, Basic <input type="checkbox"/> High School <input type="checkbox"/> College Units <input type="checkbox"/> College Graduate <input type="checkbox"/> Others (specify): _____
<b>Absenteeism (Daily Production Workers)</b>						
Average Number of workers LATE per Month			_____ Late Production Workers / Month			
Average Minutes LATE Per workers			_____ Minutes Late per workers			
Average Number of workers ABSENT per Month			_____ Absent Production Workers / Month			
Average Number of Days ABSENT per workers per Month			_____ Days Absent per workers / Month			

## Annex 28: Pearl2 Project Company Survey Form (cont)

Do you hire <b>daily-rate contractual</b> production workers? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, please fill out this table. If no, skip to the next table.				
<b>Daily-Rate Contractual Workers</b>	<b>Peak Season</b>		<b>Lean Season</b>	
	Average Number of Contractual Workers per workday (includes all shifts)	Average Take Home Pay Per Person including Overtime (In Pesos/Day)	Average Number of Contractual Workers per workday (includes all shifts)	Average Take Home Pay Per Person including Overtime (In Pesos/Day)
		<input type="checkbox"/> Below 150 <input type="checkbox"/> 240 – 270 <input type="checkbox"/> 150 - 180 <input type="checkbox"/> 270 - 300 <input type="checkbox"/> 180 - 210 <input type="checkbox"/> 300 - 330 <input type="checkbox"/> 210 - 240 <input type="checkbox"/> Above 320		<input type="checkbox"/> Below 150 <input type="checkbox"/> 240 – 270 <input type="checkbox"/> 150 - 180 <input type="checkbox"/> 270 - 300 <input type="checkbox"/> 180 - 210 <input type="checkbox"/> 300 - 330 <input type="checkbox"/> 210 - 240 <input type="checkbox"/> Above 320
Average Educational Level Attained by Daily Rate Contractual Workers		<input type="checkbox"/> None <input type="checkbox"/> Elementary, Basic <input type="checkbox"/> High School	<input type="checkbox"/> College Units <input type="checkbox"/> College Graduate <input type="checkbox"/> Others (specify): _____	

Do you hire <b>piece-rate contractual</b> production workers? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, please fill out this table. If no, skip to the next table.			
<b>Piece-Rate Contractual Workers</b>	<b>Peak Season</b>	<b>Lean Season</b>	Range of Peso per Piece
	Estimated Number of Piece-Raters Hired	Estimated Number of Piece-Raters Hired	
			PhP _____ – PhP _____

## Annex 28: Pearl2 Project Company Survey Form (cont)

<b>Workers' Skills Upgrading</b>		
<b>How long does it take for a new production worker to become skilled in production activities?</b>		
<input type="checkbox"/> Less than 1 week <input type="checkbox"/> 2 weeks to 1 month <input type="checkbox"/> 2 - 4 months <input type="checkbox"/> 1 to 2 weeks <input type="checkbox"/> 1 to 2 months <input type="checkbox"/> Others (specify): _____		
<i>Trainings/Orientations/Workshops Undergone</i>		
(List all trainings/orientations/workshops undergone or held by the company in the last 2 years)		
Topic of Training or Workshops	When (Year)	Given by Who (Trainer/Dept)
1		
2		
3		
4		
5		
6		

<b>Employee Evaluation</b>	
Employee Category	How often is worker evaluation being done?
Management <ul style="list-style-type: none"> <li>• Production Scheduler</li> <li>• Inventory Manager</li> <li>• Warehouse Supervisor</li> <li>• Quality Control</li> <li>• Product Designer / R&amp;D</li> </ul>	<input type="checkbox"/> No worker evaluation <input type="checkbox"/> Every Year <input type="checkbox"/> Every Month <input type="checkbox"/> Others (specify): _____ <input type="checkbox"/> Every 3 Months (Quarterly) <input type="checkbox"/> Every 6 Months
Regular Production Workers	<input type="checkbox"/> No worker evaluation <input type="checkbox"/> Every Year <input type="checkbox"/> Every Month <input type="checkbox"/> Others (specify): _____ <input type="checkbox"/> Every 3 Months (Quarterly) <input type="checkbox"/> Every 6 Months
Contractual Production Workers	<input type="checkbox"/> No worker evaluation <input type="checkbox"/> Renewal of Contract <input type="checkbox"/> Every Week <input type="checkbox"/> Others (specify): _____ <input type="checkbox"/> Every Month

<b>Facilities and Capacity Assessment</b>			
<i>Business Premises Area</i>			
Storage Area (Raw Materials)	Storage Area (Finished Goods)	Production Area	Finishing Area
<input type="checkbox"/> Less than 100 sq. m <input type="checkbox"/> 100 – 250 sq. m <input type="checkbox"/> 250 – 500 sq. m <input type="checkbox"/> 500 -1000 sq. m <input type="checkbox"/> 1000 - 1500 sq. m <input type="checkbox"/> Over 1500 sq. m	<input type="checkbox"/> Less than 100 sq. m <input type="checkbox"/> 100 – 250 sq. m <input type="checkbox"/> 250 – 500 sq. m <input type="checkbox"/> 500 -1000 sq. m <input type="checkbox"/> 1000 - 1500 sq. m <input type="checkbox"/> Over 1500 sq. m	<input type="checkbox"/> Less than 100 sq. m <input type="checkbox"/> 100 – 250 sq. m <input type="checkbox"/> 250 – 500 sq. m <input type="checkbox"/> 500 -1000 sq. m <input type="checkbox"/> 1000 - 1500 sq. m <input type="checkbox"/> Over 1500 sq. m	<input type="checkbox"/> Less than 100 sq. m <input type="checkbox"/> 100 – 250 sq. m <input type="checkbox"/> 250 – 500 sq. m <input type="checkbox"/> 500 -1000 sq. m <input type="checkbox"/> 1000 - 1500 sq. m <input type="checkbox"/> Over 1500 sq. m

## Annex 28: Pearl2 Project Company Survey Form (cont)

<b>Machines and Equipment</b>
Does your company use any machine/equipment? <input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, proceed to the next question. If no machines are used, skip to "Tools Used" Section page 15.
What types of machine do you have in terms of automation? (Check all that apply) <input type="checkbox"/> Manually Operated Machines (Machine needs operator to run continuously.) <input type="checkbox"/> Semi-Automated Machines (Machine needs operator at some point in time during production.) <input type="checkbox"/> Automated Machines (Machine only needs operator to setup, if necessary.)

**NOTE:** In the following sections, questions are divided according to 3 types of machines: manual, semi-automated, and automated. List down all the machines according to its designated type. Use the back pages, if necessary.

<b>Manually Operated Machineries/Equipment Used Only</b> - Machine needs operator to run continuously. (List only all manually operated machines and their uses – If there are other types of machines, list them in the next section: semi-automatic and/or automatic machines)							
Machine and Its Uses	Quantity available	Year Bought	Source of Machine (Check all that apply)	Qty of machines normally in use during:		How long is the machine running per DAY? (Including all shifts)	
				Peak	Lean	Peak Season	Lean Season
1			<input type="checkbox"/> Designed In-house <input type="checkbox"/> Purchased Locally Location: _____ <input type="checkbox"/> Imported Country: _____ <input type="checkbox"/> Others: _____			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____
2			<input type="checkbox"/> Designed In-house <input type="checkbox"/> Purchased Locally Location: _____ <input type="checkbox"/> Imported Country: _____ <input type="checkbox"/> Others: _____			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____

## Annex 28: Pearl2 Project Company Survey Form (cont)

Machine and Its Uses	Quantity available	Year Bought	Source of Machine (Check all that apply)	Qty of machines normally in use during:		How long is the machine running per DAY? (Including all shifts)	
				Peak	Lean	Peak Season	Lean Season
3			<input type="checkbox"/> Designed In-house			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____
			<input type="checkbox"/> Purchased Locally Location: _____				
			<input type="checkbox"/> Imported Country: _____				
			<input type="checkbox"/> Others: _____				
4			<input type="checkbox"/> Designed In-house			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____
			<input type="checkbox"/> Purchased Locally Location: _____				
			<input type="checkbox"/> Imported Country: _____				
			<input type="checkbox"/> Others: _____				
5			<input type="checkbox"/> Designed In-house			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____
			<input type="checkbox"/> Purchased Locally Location: _____				
			<input type="checkbox"/> Imported Country: _____				
			<input type="checkbox"/> Others: _____				
6			<input type="checkbox"/> Designed In-house			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____
			<input type="checkbox"/> Purchased Locally Location: _____				
			<input type="checkbox"/> Imported Country: _____				
			<input type="checkbox"/> Others: _____				
7			<input type="checkbox"/> Designed In-house			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____
			<input type="checkbox"/> Purchased Locally Location: _____				
			<input type="checkbox"/> Imported Country: _____				
			<input type="checkbox"/> Others: _____				

## Annex 28: Pearl2 Project Company Survey Form (cont)

<b>Machine Breakdown (for the Manual Machines)</b>			
Machine/Eqpt. <b>(As Listed Above)</b>	Average Frequency of Breakdown Ex: 4 times/day, once every 2 weeks	How long is the machine not working? (before being repaired) Ex: 5mins, 3 hrs, 2days	Who Repairs Machines
1	_____ Times every _____		<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____
2	_____ Times every _____		<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____
3	_____ Times every _____		<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____
4	_____ Times every _____		<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____
5	_____ Times every _____		<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____
6	_____ Times every _____		<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____
7	_____ Times every _____		<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____

## Annex 28: Pearl2 Project Company Survey Form (cont)

Semi-Automated Machineries/Equipment Used Only - Machine needs operator at some point in time during production. (List all machines and their uses, if there are no semi-automated machines, skip to the next section – Automated Machines)							
Machine and Its Uses	Quantity available	Year Bought	Source of Machine (Check all that apply)	Qty of machines normally in use during:		How long is the machine running per DAY? (Including all shifts)	
				Peak	Lean	Peak Season	Lean Season
1			<input type="checkbox"/> Designed In-house <input type="checkbox"/> Purchased Locally Location: _____ <input type="checkbox"/> Imported Country: _____ <input type="checkbox"/> Others: _____			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____
2			<input type="checkbox"/> Designed In-house <input type="checkbox"/> Purchased Locally Location: _____ <input type="checkbox"/> Imported Country: _____ <input type="checkbox"/> Others: _____			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____
3			<input type="checkbox"/> Designed In-house <input type="checkbox"/> Purchased Locally Location: _____ <input type="checkbox"/> Imported Country: _____ <input type="checkbox"/> Others: _____			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____
4			<input type="checkbox"/> Designed In-house <input type="checkbox"/> Purchased Locally Location: _____ <input type="checkbox"/> Imported Country: _____ <input type="checkbox"/> Others: _____			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____

## Annex 28: Pearl2 Project Company Survey Form (cont)

<b>Machine Breakdown (for the Semi-Automated Machines)</b>			
Machine/Eqpt. (As Listed Above)	Average Frequency of Breakdown Ex: 4 times/day, once every 2 weeks	How long is the machine not working? (before being repaired) Ex: 5mins, 3 hrs, 2days	Who Repairs Machines
1	_____ Times every _____		<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____
2	_____ Times every _____		<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____
3	_____ Times every _____		<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____
4	_____ Times every _____		<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____

<b>Automated Machineries/Equipment Used</b> - Machine only needs operator to setup, if necessary. (List all automated machines and their uses. Please do not include manual and semi-automated machines here.)							
Machine and Its Uses	Quantity available	Year Bought	Source of Machine (Check all that apply)	Qty of machines normally in use during:		How long is the machine running per DAY? (Including all shifts)	
				Peak	Lean	Peak Season	Lean Season
1			<input type="checkbox"/> Designed In-house <input type="checkbox"/> Purchased Locally Location: _____ <input type="checkbox"/> Imported Country: _____ <input type="checkbox"/> Others: _____			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____
2			<input type="checkbox"/> Designed In-house <input type="checkbox"/> Purchased Locally Location: _____ <input type="checkbox"/> Imported Country: _____ <input type="checkbox"/> Others: _____			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____

## Annex 28: Pearl2 Project Company Survey Form (cont)

Machine and Its Uses	Quantity available	Year Bought	Source of Machine (Check all that apply)	Qty of machines normally in use during:		How long is the machine running per DAY? (Including all shifts)	
				Peak	Lean	Peak Season	Lean Season
3			<input type="checkbox"/> Designed In-house			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____
			<input type="checkbox"/> Purchased Locally				
			Location: _____				
			<input type="checkbox"/> Imported				
4			<input type="checkbox"/> Designed In-house			<input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> 8-10 hrs <input type="checkbox"/> 10-12 hrs <input type="checkbox"/> Others: _____	<input type="checkbox"/> Below 1 hour <input type="checkbox"/> 1-2 hrs <input type="checkbox"/> 2-3 hrs <input type="checkbox"/> 3-5 hrs <input type="checkbox"/> 5-8 hrs <input type="checkbox"/> Others: _____
			<input type="checkbox"/> Purchased Locally				
			Location: _____				
			<input type="checkbox"/> Imported				
<b>Machine Breakdown (for the Automated Machines)</b>							
Machine/Eqpt. (As Listed Above)	Average Frequency of Breakdown Ex: 4 times/day, once every 2 weeks		How long is the machine not working? (before being repaired) Ex: 5mins, 3 hrs, 2days		Who Repairs Machines		
1	_____ Times every _____				<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____		
2	_____ Times every _____				<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____		
3	_____ Times every _____				<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____		
4	_____ Times every _____				<input type="checkbox"/> Service Shops <input type="checkbox"/> Operator <input type="checkbox"/> Repairman/Technician <input type="checkbox"/> Others (specify): _____		

## Annex 28: Pearl2 Project Company Survey Form (cont)

<b>Machine Parts</b>			
Do machines make use of tools or parts that require changing? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, please specify these tools/parts below.			
	Machine Parts	Frequency of Replacement Ex: 2 times/year	Common Reason for Replacement
1			<input type="checkbox"/> Worn Out / Used up <input type="checkbox"/> Upgrade <input type="checkbox"/> Defective <input type="checkbox"/> Maintenance <input type="checkbox"/> Broken <input type="checkbox"/> Others
2			<input type="checkbox"/> Worn Out / Used up <input type="checkbox"/> Upgrade <input type="checkbox"/> Defective <input type="checkbox"/> Maintenance <input type="checkbox"/> Broken <input type="checkbox"/> Others
3			<input type="checkbox"/> Worn Out / Used up <input type="checkbox"/> Upgrade <input type="checkbox"/> Defective <input type="checkbox"/> Maintenance <input type="checkbox"/> Broken <input type="checkbox"/> Others
4			<input type="checkbox"/> Worn Out / Used up <input type="checkbox"/> Upgrade <input type="checkbox"/> Defective <input type="checkbox"/> Maintenance <input type="checkbox"/> Broken <input type="checkbox"/> Others
5			<input type="checkbox"/> Worn Out / Used up <input type="checkbox"/> Upgrade <input type="checkbox"/> Defective <input type="checkbox"/> Maintenance <input type="checkbox"/> Broken <input type="checkbox"/> Others
6			<input type="checkbox"/> Worn Out / Used up <input type="checkbox"/> Upgrade <input type="checkbox"/> Defective <input type="checkbox"/> Maintenance <input type="checkbox"/> Broken <input type="checkbox"/> Others
7			<input type="checkbox"/> Worn Out / Used up <input type="checkbox"/> Upgrade <input type="checkbox"/> Defective <input type="checkbox"/> Maintenance <input type="checkbox"/> Broken <input type="checkbox"/> Others

<b>Machine/Equipment Inspection</b>	
Is there a standard procedure whenever any breakdown occurs?	
<input type="checkbox"/> Yes <input type="checkbox"/> No	
How often are machines inspected? (Check one)	<input type="checkbox"/> Whenever breakdown occurs <input type="checkbox"/> Once Every 6 Months <input type="checkbox"/> Once A Week <input type="checkbox"/> Once A Year <input type="checkbox"/> Once A Month <input type="checkbox"/> Others (specify) _____ <input type="checkbox"/> Every Quarter

## Annex 28: Pearl2 Project Company Survey Form (cont)

Comments on Equipment Inspection (Check as many as applicable)	<input type="checkbox"/> Inspection is done by worker <input type="checkbox"/> Inspection is scheduled and performed by a repairman <input type="checkbox"/> Equipment may be left alone for more than 2 days when awaiting repairs								
<b>Criteria for Machine/Equipment Acquisition</b> <input type="checkbox"/> To replace old machine/equipment <input type="checkbox"/> To increase units produced <input type="checkbox"/> To upgrade machine/equipment <input type="checkbox"/> I learned that this machine is existing thru (check all that applies) <table style="width: 100%; margin-left: 20px;"> <tr> <td><input type="checkbox"/> Broadsheet or Publications</td> <td><input type="checkbox"/> Visit to other company</td> </tr> <tr> <td><input type="checkbox"/> Salesman</td> <td><input type="checkbox"/> Endorsed by the Organization</td> </tr> <tr> <td><input type="checkbox"/> Internet</td> <td><input type="checkbox"/> Trade Fairs and Exhibits</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Others, (specify): _____</td> </tr> </table>		<input type="checkbox"/> Broadsheet or Publications	<input type="checkbox"/> Visit to other company	<input type="checkbox"/> Salesman	<input type="checkbox"/> Endorsed by the Organization	<input type="checkbox"/> Internet	<input type="checkbox"/> Trade Fairs and Exhibits	<input type="checkbox"/> Others, (specify): _____	
<input type="checkbox"/> Broadsheet or Publications	<input type="checkbox"/> Visit to other company								
<input type="checkbox"/> Salesman	<input type="checkbox"/> Endorsed by the Organization								
<input type="checkbox"/> Internet	<input type="checkbox"/> Trade Fairs and Exhibits								
<input type="checkbox"/> Others, (specify): _____									

Tools Used			
Does the company make use of hand tools? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, please identify these tools. If no, skip to the next table.			
	Tools Used	Frequency of Replacement Ex: 3 times/year, 2 times/day	Reason for Replacement
1	Ex: Glue Gun		<input type="checkbox"/> Worn Out / Used up <input type="checkbox"/> Upgrade <input type="checkbox"/> Defective <input type="checkbox"/> Maintenance <input type="checkbox"/> Broken <input type="checkbox"/> Others _____
2			<input type="checkbox"/> Worn Out / Used up <input type="checkbox"/> Upgrade <input type="checkbox"/> Defective <input type="checkbox"/> Maintenance <input type="checkbox"/> Broken <input type="checkbox"/> Others _____
3			<input type="checkbox"/> Worn Out / Used up <input type="checkbox"/> Upgrade <input type="checkbox"/> Defective <input type="checkbox"/> Maintenance <input type="checkbox"/> Broken <input type="checkbox"/> Others _____
4			<input type="checkbox"/> Worn Out / Used up <input type="checkbox"/> Upgrade <input type="checkbox"/> Defective <input type="checkbox"/> Maintenance <input type="checkbox"/> Broken <input type="checkbox"/> Others _____
5			<input type="checkbox"/> Worn Out / Used up <input type="checkbox"/> Upgrade <input type="checkbox"/> Defective <input type="checkbox"/> Maintenance <input type="checkbox"/> Broken <input type="checkbox"/> Others _____

## Annex 28: Pearl2 Project Company Survey Form (cont)

<b>Facility Layout</b>										
How was the company's production layout developed? (Check all that apply)										
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><input type="checkbox"/> Similar processes were grouped together.</td> <td style="width: 50%; border: none;"><input type="checkbox"/> Layout was dictated by available space</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Similar product types were grouped together.</td> <td style="border: none;"><input type="checkbox"/> Layout was planned to ensure continuous flow of materials.</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Dictated by space requirement of each process.</td> <td style="border: none;"><input type="checkbox"/> Others (specify) _____</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> There was no planned layout.</td> <td style="border: none;"></td> </tr> </table>		<input type="checkbox"/> Similar processes were grouped together.	<input type="checkbox"/> Layout was dictated by available space	<input type="checkbox"/> Similar product types were grouped together.	<input type="checkbox"/> Layout was planned to ensure continuous flow of materials.	<input type="checkbox"/> Dictated by space requirement of each process.	<input type="checkbox"/> Others (specify) _____	<input type="checkbox"/> There was no planned layout.		
<input type="checkbox"/> Similar processes were grouped together.	<input type="checkbox"/> Layout was dictated by available space									
<input type="checkbox"/> Similar product types were grouped together.	<input type="checkbox"/> Layout was planned to ensure continuous flow of materials.									
<input type="checkbox"/> Dictated by space requirement of each process.	<input type="checkbox"/> Others (specify) _____									
<input type="checkbox"/> There was no planned layout.										
What causes a change in the layout, if any?	<table style="border: none;"> <tr><td><input type="checkbox"/> When new equipment is bought</td></tr> <tr><td><input type="checkbox"/> When new designs are made</td></tr> <tr><td><input type="checkbox"/> When more people are hired</td></tr> <tr><td><input type="checkbox"/> Increase in volume of work</td></tr> <tr><td><input type="checkbox"/> When a new process flow is developed</td></tr> <tr><td><input type="checkbox"/> Need to increase space for raw material inventory</td></tr> <tr><td><input type="checkbox"/> Need to increase space due to work-in-process</td></tr> <tr><td><input type="checkbox"/> Need to increase space due to finished goods inventory</td></tr> <tr><td><input type="checkbox"/> Others (specify) _____</td></tr> </table>	<input type="checkbox"/> When new equipment is bought	<input type="checkbox"/> When new designs are made	<input type="checkbox"/> When more people are hired	<input type="checkbox"/> Increase in volume of work	<input type="checkbox"/> When a new process flow is developed	<input type="checkbox"/> Need to increase space for raw material inventory	<input type="checkbox"/> Need to increase space due to work-in-process	<input type="checkbox"/> Need to increase space due to finished goods inventory	<input type="checkbox"/> Others (specify) _____
<input type="checkbox"/> When new equipment is bought										
<input type="checkbox"/> When new designs are made										
<input type="checkbox"/> When more people are hired										
<input type="checkbox"/> Increase in volume of work										
<input type="checkbox"/> When a new process flow is developed										
<input type="checkbox"/> Need to increase space for raw material inventory										
<input type="checkbox"/> Need to increase space due to work-in-process										
<input type="checkbox"/> Need to increase space due to finished goods inventory										
<input type="checkbox"/> Others (specify) _____										
How long until you change the layout?	<table style="border: none;"> <tr> <td style="width: 50%; border: none;"><input type="checkbox"/> Once a month</td> <td style="width: 50%; border: none;"><input type="checkbox"/> Never</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Once every 6 months</td> <td style="border: none;"><input type="checkbox"/> Others (specify) _____</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Once a year</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Every 2-3 years</td> <td style="border: none;"></td> </tr> </table>	<input type="checkbox"/> Once a month	<input type="checkbox"/> Never	<input type="checkbox"/> Once every 6 months	<input type="checkbox"/> Others (specify) _____	<input type="checkbox"/> Once a year		<input type="checkbox"/> Every 2-3 years		
<input type="checkbox"/> Once a month	<input type="checkbox"/> Never									
<input type="checkbox"/> Once every 6 months	<input type="checkbox"/> Others (specify) _____									
<input type="checkbox"/> Once a year										
<input type="checkbox"/> Every 2-3 years										

## Annex 28: Pearl2 Project Company Survey Form (cont)

<b>Production Layout</b>	
<p>Accurately and neatly draw the production layout using the notations given; clearly define the flow of processes.            If there are different flows for different product lines, use a different arrow. Refer to sample layout.            Use words to label the areas and processes and the type of machines. Use a separate sheet if necessary.</p>	
<p>Notations: <span style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; margin-right: 5px;"></span> - Machines    <span style="display: inline-block; width: 20px; height: 15px; border: 1px solid black; margin-right: 5px;"></span> - Production Process    <span style="display: inline-block; width: 20px; border-bottom: 1px dashed black; margin-right: 5px;"></span> → Flow of Work</p>	
<p>Sample:</p> <pre> graph TD     subgraph Storage         R[Raw Materials Storage]         F[Finished Goods Storage]     end     subgraph Machines         D[Drilling machines]     end     subgraph Areas         A[Assembly Area]         I[Inspector's area]     end     R -- product 1 --&gt; D     D -- product 1 --&gt; A     A -- product 1 --&gt; F     R -- product 2 --&gt; A     A -- product 2 --&gt; I     I -- product 2 --&gt; F   </pre>	

## Annex 28: Pearl2 Project Company Survey Form (cont)

Assistance received by the Company
Assistance received from different outside agencies (local and international): (Please check all that apply)
<input type="checkbox"/> No Assistance received <input type="checkbox"/> Trade show participation <input type="checkbox"/> Sourcing of Machines/Equipment <input type="checkbox"/> Sourcing of Raw Materials <input type="checkbox"/> Sourcing of Manpower <input type="checkbox"/> Manufacturing Technology <input type="checkbox"/> Training in Production Management <input type="checkbox"/> Others (list all): _____

Components of Production System			
(Please check appropriate items)			
Activity	Manual Without Tools	Manual With Tools (Ex: Ruler, Carts, Hammer)	Use of Machine (Ex: Forklift, Machines with Special Operator)
Material Handling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Production	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Packaging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Production System (Pls. Check one)	<input type="checkbox"/> Made to Stock <input type="checkbox"/> Made to Order		

Material Handling Equipment			
Do you have existing equipment used in product/material handling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, list down the available material handling equipment.			
#	Material Handling Type	Qty.	Purpose
1	Ex. Forklift		
2	Pushcart		
3			
4			
5			
6			
7			

Production Control System	
Do you check for available production capacity before accepting an order? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Do you generate production schedule? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If yes, what is included in the company's production schedule?	<input type="checkbox"/> Type of Product/Orders to Produce <input type="checkbox"/> Quantity to Produce <input type="checkbox"/> Time to Produce <input type="checkbox"/> Assignment of Workers <input type="checkbox"/> Assignment of Machines <input type="checkbox"/> Raw Material Requirements <input type="checkbox"/> Others (specify) _____

## Annex 28: Pearl2 Project Company Survey Form (cont)

How are orders scheduled?	<input type="checkbox"/> First Come First Serve <input type="checkbox"/> Rush Orders First <input type="checkbox"/> Customer Preferences <input type="checkbox"/> Earliest Due Dates <input type="checkbox"/> Last In First Out <input type="checkbox"/> Others (specify) _____
How is work assigned to a worker?	<input type="checkbox"/> Based on Skill <input type="checkbox"/> Based on Workload <input type="checkbox"/> Others (specify) _____
How often is production schedule generated?	<input type="checkbox"/> Daily <span style="margin-left: 100px;"><input type="checkbox"/> Monthly</span> <input type="checkbox"/> Weekly <span style="margin-left: 100px;"><input type="checkbox"/> Every order</span> <input type="checkbox"/> Others (specify): _____
Select the common reasons that causes a change in production schedule: <input type="checkbox"/> Unavailable Manpower/Absenteeism <span style="margin-left: 100px;"><input type="checkbox"/> Machine Breakdown</span> <input type="checkbox"/> FG/WIP Inventory <span style="margin-left: 100px;"><input type="checkbox"/> Utilities</span> <input type="checkbox"/> Defects/Rework <span style="margin-left: 100px;"><input type="checkbox"/> Sudden Change in Order</span> <input type="checkbox"/> Unavailability of Raw Materials <span style="margin-left: 100px;"><input type="checkbox"/> Change in Customer Requirement</span> <input type="checkbox"/> Low Quality Raw Materials <span style="margin-left: 100px;"><input type="checkbox"/> Others (specify): _____</span>	
How long on the average does it take to finish the production of an order?	_____ weeks
What percentage of the time is finished goods delivered beyond the due date? (0 – 100%)	_____ %
How long on the average are delivery dates exceeded?	<input type="checkbox"/> No delays <span style="margin-left: 100px;"><input type="checkbox"/> 1 month</span> <input type="checkbox"/> 1 week <span style="margin-left: 100px;"><input type="checkbox"/> 2 months</span> <input type="checkbox"/> 2 weeks <span style="margin-left: 100px;"><input type="checkbox"/> 3 months</span> <input type="checkbox"/> 3 weeks <span style="margin-left: 100px;"><input type="checkbox"/> Others (specify) _____</span>
Reasons why finished goods are not delivered on time: (Please check all that apply) <input type="checkbox"/> Unavailable RM <span style="margin-left: 100px;"><input type="checkbox"/> Rework</span> <input type="checkbox"/> Defective RM <span style="margin-left: 100px;"><input type="checkbox"/> Shipping problem</span> <input type="checkbox"/> Rejects <span style="margin-left: 100px;"><input type="checkbox"/> Others (specify) _____</span>	

<b>Production Reports/Forms Used</b>	
Please list down the production reports and forms used.	
Production Forms and Reports	Frequency of Generating the Report
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

**NOTE:** Please attach samples of filled-up forms/reports for each, if possible.

## Annex 28: Pearl2 Project Company Survey Form (cont)

New Production Methods/Technology	
When is the last time new production methods/technology was implemented?	<input type="checkbox"/> Never <input type="checkbox"/> 3 – 5 years ago <input type="checkbox"/> Less than 1 year ago <input type="checkbox"/> More than 5 years ago <input type="checkbox"/> 1 – 3 years ago
If improvement was done, what were they?	<input type="checkbox"/> New tool <input type="checkbox"/> New design (product/package) <input type="checkbox"/> New machine/equipment <input type="checkbox"/> New schedule <input type="checkbox"/> New process <input type="checkbox"/> New inspection scheme <input type="checkbox"/> New materials <input type="checkbox"/> Others (specify) _____ <input type="checkbox"/> New layout
From where did you learn about the new production techniques? (Please check appropriate item)	<input type="checkbox"/> Within Company (In house) <input type="checkbox"/> Other Companies <input type="checkbox"/> Buyers <input type="checkbox"/> Suppliers <input type="checkbox"/> Trade Fairs <input type="checkbox"/> Internet <input type="checkbox"/> Publications <input type="checkbox"/> Others (specify) _____ <input type="checkbox"/> Designers

Product Engineering and Development	
How often are new products/designs or redesigns created?	<input type="checkbox"/> Every Week <input type="checkbox"/> Every 6 Months <input type="checkbox"/> Every Month <input type="checkbox"/> Every Year <input type="checkbox"/> Every 3 Months <input type="checkbox"/> Others (specify) _____
How many new products or new designs are made in a year, on the average?	<input type="checkbox"/> Less than 5 <input type="checkbox"/> 30 – 50 designs <input type="checkbox"/> 5 – 10 designs <input type="checkbox"/> 50 – 75 designs <input type="checkbox"/> 10 – 20 designs <input type="checkbox"/> 75 – 100 designs <input type="checkbox"/> 20 – 30 designs <input type="checkbox"/> Others (specify) _____ designs
Number of designers or product developer in the company	_____ product developers or designers
Number of sample-maker or prototype-maker in the company	_____ people involved in prototyping or sample-making
How long on the average does it take to make the prototype or sample product?	_____ days to make prototype or sample
Who is the source of design concept?	<input type="checkbox"/> Company Design <input type="checkbox"/> Customer Design <input type="checkbox"/> Others (specify): _____ <input type="checkbox"/> Both Company & Customer <input type="checkbox"/> Consultant
If Company is the source of design concept, where does the company get their ideas for the design concepts? (Please check all that apply)	<input type="checkbox"/> Buyers <input type="checkbox"/> Local Designers <input type="checkbox"/> Trade Fairs <input type="checkbox"/> Foreign Designers <input type="checkbox"/> Publications <input type="checkbox"/> Internet <input type="checkbox"/> Researches <input type="checkbox"/> Others (pls specify) _____
Do you have a design lab and development facilities?	<input type="checkbox"/> Yes <input type="checkbox"/> No
How long on the average is the total time of design conceptualization stage of a new product to the manufacturing phase to the delivery of the product to the customer?	<input type="checkbox"/> Less than 1 month <input type="checkbox"/> 6 months to 9 months <input type="checkbox"/> 1 month to 3 months <input type="checkbox"/> 9 months to 1 year <input type="checkbox"/> 3 months to 6 months <input type="checkbox"/> Others (specify): _____

## Annex 28: Pearl2 Project Company Survey Form (cont)

<b>Packaging</b>	
Do existing products have packaging?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are packaged products well-kept and preserved before delivery?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are new packaging being developed regularly?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, what are the sources of information for new packaging concepts and ideas? (Please check all that apply)	<input type="checkbox"/> Buyers <input type="checkbox"/> In-house Researches <input type="checkbox"/> Publications <input type="checkbox"/> Designers <input type="checkbox"/> Internet <input type="checkbox"/> Others (specify): _____ <input type="checkbox"/> Trade Fairs
Do you package products based on buyers' specification?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Who makes the packaging material of the products?	<input type="checkbox"/> Company <input type="checkbox"/> Packaging Material Supplier <input type="checkbox"/> Customer

<b>Production Standards Development</b>	
Does the company have standards for production processes? (Ex: Standard production time and manufacturing procedure)	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, what is the basis of the <u>process</u> standards? (Check all that apply)	<input type="checkbox"/> Company set standards <input type="checkbox"/> Industry practice <input type="checkbox"/> International set standards <input type="checkbox"/> Customer specification <input type="checkbox"/> Others (specify) _____
Does the company have standards for products and quality? (Ex: acceptable reject rate, acceptable quality, characteristics)	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, what is the basis of the <u>product and quality</u> standards? (Check all that apply)	<input type="checkbox"/> Company standards <input type="checkbox"/> Industry practice <input type="checkbox"/> International standards <input type="checkbox"/> Customer specification <input type="checkbox"/> Others (specify) _____

<b>Quality Control</b>	
Has the company been granted/awarded by any quality certifications?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, which among the quality certifications listed below have been <u>granted to the company</u> ?	<input type="checkbox"/> Philippine Quality Award for Mastery in Quality Management <input type="checkbox"/> Philippine Quality Award for Proficiency in Quality Management <input type="checkbox"/> Philippine Quality Award for Commitment to Quality Management <input type="checkbox"/> Philippine Quality Award for Performance Excellence <input type="checkbox"/> Golden Shell Award (DTI) <input type="checkbox"/> ISO 9000 Quality Management <input type="checkbox"/> ISO 14001 Environmental Management System <input type="checkbox"/> Best in Quality Award given by _____ <input type="checkbox"/> Compliance with Buying Agents <input type="checkbox"/> Compliance with Buyers Requirement <input type="checkbox"/> Others (specify): _____

## Annex 28: Pearl2 Project Company Survey Form (cont)

Does the company intend to apply for any quality certifications in the next 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If yes, which among the quality certifications listed does the company <u>intend to apply</u> ? <input type="checkbox"/> Philippine Quality Award for Mastery in Quality Management <input type="checkbox"/> Philippine Quality Award for Proficiency in Quality Management <input type="checkbox"/> Philippine Quality Award for Commitment to Quality Management <input type="checkbox"/> Philippine Quality Award for Performance Excellence <input type="checkbox"/> Golden Shell Award (DTI) <input type="checkbox"/> ISO 9000 (Quality Management) <input type="checkbox"/> ISO 14001 Environmental Management System <input type="checkbox"/> Others (specify): _____	
Quality Control System (check all that apply)	<input type="checkbox"/> Have testing equipment for quality checking <input type="checkbox"/> Have assigned personnel for quality checking <input type="checkbox"/> Have standard procedures of quality checking <input type="checkbox"/> Have clear customer specifications of quality <input type="checkbox"/> Physical testing <input type="checkbox"/> Chemical testing
Where are defects found most of the time?	<input type="checkbox"/> Defects found due to design <input type="checkbox"/> Raw materials/supplies (Defects found before production) <input type="checkbox"/> Within Production Process (Material/Machine breaks during production) <input type="checkbox"/> Final Inspection by Manager (Before delivery) <input type="checkbox"/> Customer Complains (After delivery) <input type="checkbox"/> Others (Pls. specify) _____
What percentage of raw materials are discarded because of poor quality?	%
What percentage of production become rejects before final processing?	%
What percentage of finished products are rejected after inspection?	%
What percentage of delivered products are returned by customers?	%

Manufacturing Costs	
Please give an estimated annual cost for each of the following production cost	
Cost Component	Estimated Total Annual Cost
Raw Materials	PhP
Production Workers Labor Cost (Wages and Benefits)	PhP
Administrative Cost (Salaries and Benefits of Operation Management)	PhP
Supplies	PhP
Machine/Equipment Maintenance	PhP
Overhead Costs (Power, Water, Rent, etc)	PhP
Research and Development	PhP
Others (specify): _____	PhP
_____	PhP
<b>TOTAL</b>	PhP

Cost Reduction in Shops	
Are there cost reduction measures or procedures? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Who is responsible for cost reduction measures in shops? <input type="checkbox"/> Owner <input type="checkbox"/> Manager/Supervisor <input type="checkbox"/> Workers <input type="checkbox"/> Others (specify) _____	
Does the plant measure product waste? <input type="checkbox"/> Yes <input type="checkbox"/> No	

## Annex 28: Pearl2 Project Company Survey Form (cont)

Please rank the following in terms of priority in cost reduction (Use 1-8, 1 being the highest priority in cost reduction and 8 being the least priority in cost reduction)		
Cost Components	Rank	Give Reasons why #1 is First, #2 is Second, etc.
Raw Materials		
Labor		
Overhead		
Waste		
Warehousing		
Delivery		
Marketing		
Research and Development		
Others: _____		

Raw Materials Sourcing	
How do you source most of your raw materials?	<input type="checkbox"/> Direct From Supplier <input type="checkbox"/> Through Middleman <input type="checkbox"/> Both supplier and middleman
Is there a raw materials inspection procedure?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Where do you get most (more than 2/3) of your raw materials?	<input type="checkbox"/> Own Supply <input type="checkbox"/> Imported <input type="checkbox"/> From Local Market
How long on the average is the delivery period for raw materials sourced from the local market?	<input type="checkbox"/> No local RM <input type="checkbox"/> 4 – 6 weeks <input type="checkbox"/> Less than 1 week <input type="checkbox"/> 6 – 8 weeks <input type="checkbox"/> 1 – 2 weeks <input type="checkbox"/> Others (specify) _____ <input type="checkbox"/> 2 – 4 weeks
How long on the average is the delivery period for imported raw materials?	<input type="checkbox"/> No imported RM <input type="checkbox"/> 4 – 6 weeks <input type="checkbox"/> Less than 1 week <input type="checkbox"/> 6 – 8 weeks <input type="checkbox"/> 1 – 2 weeks <input type="checkbox"/> Others (specify) _____ <input type="checkbox"/> 2 – 4 weeks
In what form do the company's raw materials come? _____% Unprocessed (Direct from nature, supplier has not yet processed the RM) _____% Semi-Processed (Processed by supplier but still to be processed in-house) _____% Processed (No need to process in-house, ready for assembly) 100 % TOTAL RAW MATERIALS	

Raw Materials Delivery	
Do raw materials generally arrive on time? <input type="checkbox"/> Never on time <input type="checkbox"/> Seldom on time <input type="checkbox"/> Mostly on time <input type="checkbox"/> Always on time <input type="checkbox"/> We pick up our raw materials ourselves	
Which raw materials are often delivered late? <input type="checkbox"/> Locally sourced ones <input type="checkbox"/> Directly imported raw materials <input type="checkbox"/> Imported RM from local traders	

Raw Materials Inventory Control	
Do you monitor usage of raw materials? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Do you keep track of current inventory level? <input type="checkbox"/> Yes <input type="checkbox"/> No	
How long on the average do your raw materials stay in the warehouse?	<input type="checkbox"/> Less than 1 week <input type="checkbox"/> 4 – 6 weeks <input type="checkbox"/> 1 week to 2 weeks <input type="checkbox"/> 6 – 8 weeks <input type="checkbox"/> 2 – 3 weeks <input type="checkbox"/> 8 – 10 weeks <input type="checkbox"/> 3 – 4 weeks <input type="checkbox"/> More than 10 weeks

## Annex 28: Pearl2 Project Company Survey Form (cont)

What problems does the company encounter in raw materials storage? (Check all that apply)	<input type="checkbox"/> Spoilage/Rotten <input type="checkbox"/> Dusty <input type="checkbox"/> Theft/Stolen <input type="checkbox"/> Damaged Due to Mishandling	<input type="checkbox"/> Damaged due to Pests <input type="checkbox"/> Always in good condition <input type="checkbox"/> Others (specify) _____
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Common Problems with Raw Materials	
Please Rank using 1 – 5, with 1 as most common problem to 5 as the least common	
Problem Areas in Raw Materials	Rank
Quality	
Availability	
Delivery	
Price of RM	
Others (specify): _____	

List of Raw Materials			
Please identify the most important raw materials you order as well as its location and cost.			
Major Raw Materials	Supplier location	Ordering Policy (Check one)	Peso value per order (Ex. P25,000 per order)
	<input type="checkbox"/> Locally sourced <input type="checkbox"/> Imported directly <input type="checkbox"/> Imported through local trader	<input type="checkbox"/> Order for stock <input type="checkbox"/> Order as needed	
	<input type="checkbox"/> Locally sourced <input type="checkbox"/> Imported directly <input type="checkbox"/> Imported through local trader	<input type="checkbox"/> Order for stock <input type="checkbox"/> Order as needed	
	<input type="checkbox"/> Locally sourced <input type="checkbox"/> Imported directly <input type="checkbox"/> Imported through local trader	<input type="checkbox"/> Order for stock <input type="checkbox"/> Order as needed	
	<input type="checkbox"/> Locally sourced <input type="checkbox"/> Imported directly <input type="checkbox"/> Imported through local trader	<input type="checkbox"/> Order for stock <input type="checkbox"/> Order as needed	
	<input type="checkbox"/> Locally sourced <input type="checkbox"/> Imported directly <input type="checkbox"/> Imported through local trader	<input type="checkbox"/> Order for stock <input type="checkbox"/> Order as needed	
	<input type="checkbox"/> Locally sourced <input type="checkbox"/> Imported directly <input type="checkbox"/> Imported through local trader	<input type="checkbox"/> Order for stock <input type="checkbox"/> Order as needed	
	<input type="checkbox"/> Locally sourced <input type="checkbox"/> Imported directly <input type="checkbox"/> Imported through local trader	<input type="checkbox"/> Order for stock <input type="checkbox"/> Order as needed	
	<input type="checkbox"/> Locally sourced <input type="checkbox"/> Imported directly <input type="checkbox"/> Imported through local trader	<input type="checkbox"/> Order for stock <input type="checkbox"/> Order as needed	
	<input type="checkbox"/> Locally sourced <input type="checkbox"/> Imported directly <input type="checkbox"/> Imported through local trader	<input type="checkbox"/> Order for stock <input type="checkbox"/> Order as needed	
	<input type="checkbox"/> Locally sourced <input type="checkbox"/> Imported directly <input type="checkbox"/> Imported through local trader	<input type="checkbox"/> Order for stock <input type="checkbox"/> Order as needed	

